ภาคผนวก ก
ข้อมูลทางอุตุนิยมวิทยา

ข้อมูลอุตุนิยมวิทยา เดือนสิงหาคม/2012

Date	Temperature Air Max	Temperature Air Minimum	Temperature Air Average	Temperature Grass minimum	Temperture Water Maximum	Temperature Water Minimum	Temperature Water Average	RH Maximum	RH Minimum			Rain '19.00-07.00	24 hrs.	Rain Max/15 Min	Evaporation(mm)	Dew	Wind rum at 50 cm. (Km/da		Mean wind	Direction	Temperature Soil at 0 cm	Temperature Soil at 5 cm	Temperature Soil at 10 cm	Temperature Soil at 20 cm	Temperature Soil at 50 cm
8/1/2012	33.2	25.5	29.4	24.5	34.0	23.0	28.5	80.0	35.0	57.5	0.0	0.0	0.0	0.0	4.6	0.045	-	4.6	2.0	SSE	28.4	28.4	28.6	29.0	30.0
8/2/2012	30.6	25.5	28.1	24.7	31.5	23.3	27.4	84.0	55.0	69.5	0.0	0.0	0.0	0.0	4.0	0.020	-	3.1	3.0	SW	28.1	27.7	28.3	28.8	30.0
8/3/2012	33.1	25.3	29.2	25.0	34.2	22.5	28.4	88.0	34.0	61.0	0.0	1.3	1.3	1.3	5.6	0.000	-	3.0	1.0	SW	29.2	27.6	27.9	28.2	29.7
8/4/2012	34.0	25.4	29.7	24.8	33.5	23.5	28.5	94.0	38.0	66.0	0.0	0.0	0.0	0.0	3.8	R+D	-	6.4	3.0	SW	29.4	28.7	28.7	28.8	29.9
8/5/2012	31.0	26.0	28.5	24.7	32.3	22.2	27.3	86.0	49.0	67.5	0.0	0.0	0.0	0.0	2.3	0.000	-	4.9	2.0	S	28.6	28.3	28.6	29.1	30.3
8/6/2012	32.3	25.7	29.0	24.8	33.3	23.0	28.2	82.0	50.0	66.0	0.0	0.0	0.0	0.0	3.9	0.045	-	3.1	0.0	C	28.5	28.6	29.1	29.5	30.5
8/7/2012	34.0	25.0	29.5	24.4	34.5	23.4	29.0	86.0	36.0	61.0	0.0	0.0	0.0	0.0	2.7	0.020	-	3.4	1.0	SSW	27.5	28.4	29.6	29.7	31.3
8/8/2012	31.2	24.8	28.0	24.7	32.0	23.5	27.8	90.0	55.0	72.5	0.0	0.0	0.0	0.0	4.0	0.045	-	2.2	1.0	SW	27.7	28.6	29.2	29.6	31.2
8/9/2012	29.2	24.2	26.7	24.0	30.0	22.8	26.4	92.0	68.0	80.0	3.8	0.0	3.8	1.0	1.0	0.020	-	4.9	0.0	C	26.0	26.9	28.5	28.9	30.7
8/10/2012	30.8	24.1	27.5	24.0	31.2	21.2	26.2	95.0	53.0	74.0	0.0	0.0	0.0	0.0	3.4	R	-	5.5	1.0	SW	26.4	27.1	28.0	28.7	30.3
8/11/2012	32.3	25.2	28.8	24.2	33.0	21.5	27.3	88.0	46.0	67.0	0.0	0.0	0.0	0.0	4.6	0.000	-	4.4	0.0	C	28.2	28.5	28.4	28.9	30.5
8/12/2012	33.4	25.2	29.3	24.5	32.8	22.5	27.7	86.0	36.0	61.0	0.0	0.0	0.0	0.0	3.5	0.000	-	4.3	2.0	SW	28.4	28.3	29.0	29.2	30.5
8/13/2012	34.0	24.6	29.3	23.6	34.0	22.8	28.4	92.0	33.0	62.5	2.2	0.0	2.2	0.0	6.8	0.010	-	5.2	1.0	SSW	28.8	28.8	29.4	29.6	30.6
8/14/2012	33.0	24.3	28.7	23.0	33.5	22.5	28.0	88.0	48.0	68.0	3.8	0.0	3.8	0.0	6.0	0.045	-	4.4	3.0	SW	28.6	28.4	29.3	29.6	30.9
8/15/2012	34.4	25.8	30.1	25.1	35.4	23.0	29.2	90.0	40.0	65.0	0.0	0.0	0.0	0.0	4.4	0.020	-	3.1	1.0	SW	29.5	29.6	29.7	29.9	31.0
8/16/2012	36.4	25.4	30.9	25.0	34.8	23.5	29.2	82.0	34.0	58.0	0.0	0.0	0.0	0.0	5.9	0.020	-	4.7	2.0	W	29.7	29.6	29.7	30.0	31.0
8/17/2012	32.8	25.7	29.3	24.6	31.5	22.2	26.9	81.0	38.0	59.5	0.0	0.0	0.0	0.0	5.6	0.010	-	5.2	1.0	SSW	29.5	29.7	29.8	30.0	31.0
8/18/2012	34.4	25.1	17.2	25.5	31.7	23.0	27.4	92.0	39.0	65.5	6.2	0.0	6.2	2.0	4.0	0.000	-	5.1	1.0	S	27.9	27.6	29.4	29.9	31.0
8/19/2012	34.7	24.4	29.6	24.1	34.2	22.5	28.4	93.0	38.0	65.5	21.1	5.1	26.2	0.0	5.1	R+D	-	5.7	1.0	S	27.2	27.1	28.7	29.3	31.0
8/20/2012	35.1	24.6	29.9	24.4	32.5	23.2	27.9	94.0	32.0	63.0	7.0	3.9	10.9	0.0	3.4	R+D	-	4.0	1.0	W	27.9	27.9	29.8	29.8	30.9

Date	Temperature Air Max	Temperature Air Minimum	Temperature Air Average	Temperature Grass minimum	Temperature Water Maximum	Temperature Water Minimum	Temperature Water Average	RH Maximum	RH Minimum			Rain '19.00-07.00	24 hrs.	Rain Max/15 Min	Evaporation(mm)	Dew	Wind run at 50 cm. (Km/day		Mean wind	Direction	Temperature Soil at 0 cm	Temperature Soil at 5 cm	Temperature Soil at 10 cm	Temperature Soil at 20 cm	Temperature Soil at 50 cm
8/21/2012	32.6	23.4	28.0	23.8	33.0	22.8	27.9	94.0	55.0	74.5	0.0	0.4	0.0	0.0	8.4	R	-	3.8	0.0	C	28.0	28.3	30.0	30.5	31.0
8/22/2012	35.0	24.3	29.7	24.0	36.5	23.0	29.8	-	-	-	0.0	0.0	0.0	0.0	0.7	0.045	-	5.2	1.0	NE	29.3	29.4	30.0	30.6	31.2
8/23/2012	34.2	25.0	29.6	24.2	35.0	23.2	29.1	92.0	50.0	71.0	0.0	0.0	0.0	0.0	7.6	0.045	-	3.1	0.0	C	30.0	29.7	30.4	31.0	31.4
8/24/2012	36.0	26.0	31.0	25.1	35.0	23.5	29.3	93.0	35.0	64.0	0.0	0.0	0.0	0.0	1.5	0.020	-	7.3	0.0	C	30.3	30.4	31.0	31.4	31.6
8/25/2012	35.0	25.6	30.3	24.5	35.2	23.5	29.4	95.0	39.0	67.0	0.0	4.8	4.8	0.0	5.9	0.010	-	7.4	2.0	ESE	29.4	29.2	30.9	31.4	31.9
8/26/2012	33.3	25.5	29.4	25.5	34.5	22.5	28.5	96.0	50.0	73.0	9.2	7.5	16.7	0.0	3.2	R+D	-	3.1	0.0	C	28.8	28.8	30.4	31.0	32.0
8/27/2012	34.6	25.4	30.0	25.0	34.5	22.0	28.3	94.0	39.0	66.5	0.0	0.0	0.0	0.0	5.9	R	-	4.3	0.0	C	29.4	29.8	30.5	30.9	31.8
8/28/2012	34.6	25.6	30.1	25.0	32.0	23.5	27.8	94.0	36.0	65.0	0.0	4.6	4.6	0.0	4.9	0.020	-	4.8	1.0	SSE	30.3	30.6	31.0	31.3	31.9
8/29/2012	34.0	25.5	29.8	25.0	33.0	23.0	28.0	93.0	44.0	68.5	0.0	0.4	0.4	0.1	5.0	R+D	-	4.2	2.0	SSE	28.6	29.5	30.4	30.9	31.9
8/30/2012	32.9	25.2	29.1	24.6	34.5	24.0	29.3	94.0	42.0	68.0	3.0	0.0	3.0	0.0	3.6	R+D	-	3.9	0.0	C	28.2	29.9	30.4	30.9	31.7
8/31/2012	33.5	24.4	29.0	24.3	33.5	23.0	28.3	93.0	46.0	69.5	0.0	0.0	0.0	0.0	4.0	R+D	-	4.6	2.0	S	28.3	29.0	30.3	30.8	31.9
Average	33.4	25.1	28.8	24.5	33.4	22.9	28.2	90.0	43.1	66.6	56.3	28.0	83.9	2.0	4.4	0.021	-	4.5	1.1	-	28.6	28.7	29.5	29.9	31.0

ข้อมูลอุตุนิยมวิทยา เดือนกันยายน/2012

Date	Temperature Air Max	Temperature Air Minimum	Temperature Air Average	Temperature Grass minimum	Temperture Water Maximum	Temperature Water Minimu	Temperature Water Average	RH Maximum	RH Minimum	Average	Rain '07.00-19.00	Rain '19.00-07.00	24 hrs.	Rain Max/15 Min	Evaporation(mm)	Dew	Wind rum at 50 cm. (Km/da	Wind rum at 2 m (Km/day)	Mean wind	Direction	Temperature Soil at 0 cm	Temperature Soil at 5 cm	Temperature Soil at 10 cm	Temperature Soil at 20 cm	Temperature Soil at 50 cm
9/1/2012	34.0	25.0	29.5	24.6	34.5	22.5	28.5	92.0	40.0	66.0	0.0	0.0	0.0	0.0	4.8	0.020	-	3.0	0.0	C	29.5	29.5	30.3	30.7	31.7
9/2/2012	35.4	25.0	30.2	24.2	36.5	23.0	29.8	93.0	51.0	72.0	0.0	1.2	1.2	0.0	5.7	0.000	-	6.8	1.0	W	28.8	29.1	30.4	30.8	31.9
9/3/2012	33.5	25.1	29.3	25.0	34.3	23.5	28.9	90.0	42.0	66.0	0.0	0.0	0.0	0.0	2.4	0.020	-	2.6	1.0	WNW	29.5	29.4	30.1	30.2	32.0
9/4/2012	30.2	25.0	27.6	24.6	31.0	23.5	27.3	94.0	62.0	78.0	2.5	0.0	2.5	0.0	2.6	0.010	-	3.4	0.0	C	27.8	28.4	29.6	30.1	31.9
9/5/2012	33.4	24.4	28.9	23.5	32.5	22.0	27.3	96.0	48.0	72.0	13.3	14.3	27.6	0.0	4.8	0.045	-	3.3	0.0	C	27.6	28.6	29.3	29.7	31.7
9/6/2012	31.3	24.4	27.9	24.3	34.2	23.0	28.6	95.0	59.0	77.0	10.9	65.1	76.0	0.0	FULL	0.020	-	3.8	1.0	WNW	27.4	27.5	29.1	29.6	31.5
9/7/2012	31.6	24.5	28.1	24.4	32.0	23.5	27.8	94.0	62.0	78.0	24.0	2.8	26.8	0.0	FULL	R+D	-	3.3	0.0	C	28.1	28.2	28.9	29.1	30.0
9/8/2012	33.6	24.7	29.2	24.0	32.5	23.5	28.0	95.0	45.0	70.0	0.0	0.0	0.0	0.0	2.4	R	-	4.0	1.0	S	28.0	28.4	29.3	29.2	29.9
9/9/2012	33.0	24.4	28.7	25.4	34.0	23.2	28.6	95.0	41.0	68.0	0.0	48.1	48.1	0.0	FULL	0.045	-	5.6	0.0	C	29.3	29.2	30.2	30.0	30.3
9/10/2012	30.0	24.0	27.0	23.4	31.0	23.4	27.2	96.0	76.0	86.0	0.0	0.0	0.0	0.0	4.7	0.010	-	2.4	0.0	C	28.6	28.8	29.3	29.4	30.2
9/11/2012	34.6	24.9	29.8	24.7	35.5	23.6	29.6	94.0	58.0	76.0	0.0	0.0	0.0	0.0	3.1	0.045	-	3.1	0.0	C	29.0	29.3	29.8	29.9	30.4
9/12/2012	35.2	25.2	30.2	24.8	36.2	24.0	30.1	92.0	39.0	65.5	15.9	0.0	15.9	0.0	6.5	0.045	-	4.3	0.0	C	28.7	28.8	30.4	30.5	30.5
9/13/2012	34.0	25.0	29.5	24.9	34.5	23.0	28.8	92.0	60.0	76.0	2.7	0.0	2.7	0.0	5.1	0.020	-	2.2	0.0	C	28.9	28.6	30.1	30.0	30.8
9/14/2012	35.0	25.1	30.1	24.8	34.8	23.0	28.9	94.0	44.0	69.0	0.0	7.8	7.8	0.0	4.8	0.045	-	3.3	0.0	C	28.9	29.2	29.9	30.2	31.1
9/15/2012	33.0	23.4	28.2	22.5	33.5	23.0	28.3	94.0	46.0	70.0	0.0	0.0	0.0	0.0	4.3	R	-	3.6	1.0	S	28.2	28.7	29.6	30.0	31.2
9/16/2012	31.7	25.4	28.6	25.0	32.5	23.0	27.8	94.0	52.0	73.0	0.0	0.8	0.8	0.0	3.4	0.045	-	2.5	0.0	C	29.0	29.2	30.0	30.2	31.4
9/17/2012	33.2	24.6	28.9	24.0	32.5	22.5	27.5	95.0	48.0	71.5	0.0	0.0	0.0	0.0	3.1	0.045	-	4.1	0.0	C	29.4	30.0	30.2	30.4	31.5
9/18/2012	31.2	26.0	28.6	25.2	33.2	24.0	28.6	95.0	61.0	78.0	0.0	0.0	0.0	0.0	1.7	0.045	-	2.4	0.0	C	29.1	29.3	30.3	30.6	31.5
9/19/2012	35.0	24.9	30.0	24.5	35.2	24.0	29.6	94.0	40.0	67.0	0.0	13.0	13.0	0.0	5.0	0.020	-	3.2	0.0	C	29.4	29.2	28.8	28.9	31.5
9/20/2012	34.9	23.9	29.4	25.3	35.5	23.8	29.7	92.0	55.0	73.5	0.0	48.4	48.4	0.0	FULL	R+D	-	4.1	0.0	C	29.2	29.3	30.2	30.5	31.5

Date	Temperature Air Max	Temperature Air Minimum	Temperature Air Average	Temperature Grass minimum	Temperture Water Maximum	Temperature Water Minimum	Temperature Water Average	RH Maximum	RH Minimum	Average	Rain '07.00-19.00	Rain '19.00-07.00	24 hrs.	Rain Max/15 Min	Evaporation(mm)	Dew	Wind rum at 50 cm. (Km/day	Wind rum at 2 m (Km/day)	Mean wind	Direction	Temperature Soil at 0 cm	Temperature Soil at 5 cm	Temperature Soil at 10 cm	Temperature Soil at 20 cm	Temperature Soil at 50 cm
9/21/2012	32.5	23.9	28.2	23.8	33.5	22.0	27.8	96.0	56.0	76.0	0.0	0.0	0.0	0.0	2.7	R	-	5.1	0.0	C	28.7	29.3	29.6	29.9	30.9
9/22/2012	35.2	26.0	30.6	25.5	36.0	22.5	29.3	92.0	50.0	71.0	0.0	0.0	0.0	0.0	3.6	0.045	-	3.1	0.0	C	29.8	30.2	30.5	30.4	30.9
9/23/2012	35.4	26.4	30.9	26.1	36.8	24.0	30.4	92.0	61.0	76.5	0.0	0.0	0.0	0.0	5.1	0.045	-	4.2	1.0	SW	30.0	30.2	30.8	31.0	31.3
9/24/2012	34.2	25.4	29.8	25.3	35.5	23.0	29.3	94.0	46.0	70.0	0.0	0.0	0.0	0.0	4.0	0.045	-	4.9	0.0	C	30.2	30.2	30.7	30.8	31.4
9/25/2012	34.2	25.0	29.6	24.8	35.5	24.0	29.8	92.0	50.0	71.0	0.0	0.0	0.0	0.0	3.3	0.045	-	3.3	0.0	C	29.6	29.9	30.6	30.9	31.7
9/26/2012	34.0	25.2	29.6	25.0	34.5	25.0	29.8	91.0	40.0	65.5	1.2	2.0	3.2	0.0	4.2	0.045	-	3.9	0.0	C	29.2	29.6	30.5	30.8	31.7
9/27/2012	32.5	24.0	28.3	25.1	33.0	25.2	29.1	94.0	60.0	77.0	53.5	4.2	57.7	0.0	FULL	R+D	-	2.1	0.0	C	28.2	28.8	29.9	30.1	31.7
9/28/2012	28.2	24.9	26.6	24.8	32.0	22.5	27.3	94.0	82.0	88.0	32.2	0.0	32.2	0.0	4.3	R	-	4.2	1.0	SW	27.2	27.4	28.8	28.8	31.2
9/29/2012	33.3	24.8	29.1	24.6	32.6	23.0	27.8	94.0	40.0	67.0	0.0	0.0	0.0	0.0	4.3	0.010	-	4.1	0.0	C	28.1	28.3	29.0	28.9	30.6
9/30/2012	33.9	25.4	29.7	25.0	35.0	23.7	29.4	92.0	40.0	66.0	0.0	0.0	0.0	0.0	4.9	0.045	-	2.3	0.0	C	29.1	29.2	29.7	29.9	30.8
Average	33.2	24.9	29.1	24.6	34.0	23.3	28.7	93.6	51.8	72.7	156.2	207.7	363.9	0.0	4.0	0.033	-	3.6	0.2	-	28.8	29.1	29.9	30.1	31.2

ข้อมูลอุตุนิยมวิทยา เดือนตุลาคม/2012

Date	Temperature Air Max	Temperature Air Minimum	Temperature Air Average	Temperature Grass minimum	Temperture Water Maximum	Temperature Water Minimu	Temperature Water Average	RH Maximum	RH Minimum	Average	Rain '07.00-19.00	Rain '19.00-07.00	24 hrs.	Rain Max/15 Min	Evaporation(mm)	Dew	Wind rum at 50 cm. (Km/da	Wind rum at 2 m (Km/day)	Mean wind	Direction	Temperature Soil at 0 cm	Temperature Soil at 5 cm	Temperature Soil at 10 cm	Temperature Soil at 20 cm	Temperature Soil at 50 cm
10/1/2012	34.0	26.8	30.4	26.0	32.8	23.0	27.9	96.0	37.0	66.5	0.0	0.0	0.0	0.0	3.4	0.045	-	2.2	0.0	C	29.6	29.8	30.4	30.3	31.1
10/2/2012	34.0	25.5	29.8	25.2	35.0	22.5	28.8	93.0	48.0	70.5	0.0	0.2	0.2	0.0	4.9	0.020	-	3.2	0.0	C	29.8	30.0	30.6	30.2	31.4
10/3/2012	34.4	25.2	29.8	25.0	35.2	25.0	30.1	94.0	50.0	72.0	0.0	0.0	0.0	0.0	4.2	R+D	-	4.3	0.0	C	29.3	29.7	30.5	30.6	31.5
10/4/2012	34.6	24.6	29.6	23.5	36.2	25.2	30.7	96.0	37.0	66.5	0.0	0.0	0.0	0.0	5.2	0.045	-	4.1	0.0	C	29.2	30.1	30.2	30.5	30.9
10/5/2012	36.0	25.2	30.6	25.1	36.0	24.2	30.1	96.0	40.0	68.0	0.0	2.8	2.8	0.0	5.2	0.045	-	3.2	0.0	C	29.7	30.5	30.5	30.6	31.2
10/6/2012	29.4	25.0	27.2	24.9	31.0	24.0	27.5	95.0	80.0	87.5	2.4	0.0	2.4	0.0	1.5	0.020	-	2.4	0.0	C	28.1	28.4	29.8	30.2	31.6
10/7/2012	33.1	24.4	28.8	23.6	34.0	21.5	27.8	94.0	50.0	72.0	0.0	0.8	0.8	0.0	3.3	0.075	-	4.1	0.0	C	28.4	28.9	29.6	29.6	31.6
10/8/2012	29.5	24.2	26.9	24.0	30.5	21.0	25.8	96.0	58.0	77.0	0.4	38.6	39.0	0.0	FULL	R+D	-	3.9	0.0	C	27.3	28.2	28.6	29.1	30.7
10/9/2012	31.0	24.3	27.7	23.5	32.5	21.0	26.8	94.0	60.0	77.0	0.9	15.0	15.9	0.0	4.1	R	-	3.1	0.0	C	26.5	27.3	27.8	28.5	30.2
10/10/2012	33.5	24.4	29.0	23.9	33.0	20.5	26.8	96.0	45.0	70.5	15.7	0.0	15.7	0.0	FULL	R	-	3.4	0.0	C	27.3	27.8	28.6	28.7	30.0
10/11/2012	34.9	24.5	29.7	24.1	35.5	22.2	28.9	92.0	50.0	71.0	0.0	0.0	0.0	0.0	5.0	R+D	-	2.1	0.0	C	28.8	28.8	29.3	29.5	30.3
10/12/2012	35.2	24.5	29.9	24.0	35.0	21.0	28.0	92.0	35.0	63.5	0.0	0.0	0.0	0.0	2.3	0.045	-	2.2	0.0	C	30.1	30.5	30.1	30.3	30.6
10/13/2012	35.7	25.4	30.6	25.0	25.8	22.2	24.0	92.0	35.0	63.5	0.0	0.0	0.0	0.0	6.7	0.075	-	2.4	0.0	C	31.8	31.3	30.9	30.6	30.9
10/14/2012	35.3	25.6	30.5	25.4	35.8	25.2	30.5	94.0	55.0	74.5	0.0	0.0	0.0	0.0	3.4	0.045	-	2.6	0.0	C	31.2	31.5	31.1	31.3	31.1
10/15/2012	32.8	24.9	28.9	24.6	33.3	22.0	27.7	94.0	55.0	6.0	0.0	6.0	6.0	0.0	4.4	0.010	-	3.1	0.0	C	29.4	29.6	30.6	30.7	31.4
10/16/2012	34.6	24.5	29.6	24.0	34.3	24.5	29.4	95.0	37.0	66.0	0.0	0.0	0.0	0.0	3.1	0.075	-	2.2	0.0	C	29.3	30.1	30.4	30.6	31.4
10/17/2012	33.3	25.2	29.3	24.5	32.8	24.5	28.7	94.0	46.0	70.0	0.0	0.0	0.00	0.0	4.6	0.045	-	3.4	0.0	C	30.0	30.2	30.9	31.0	31.4
10/18/2012	34.4	23.0	28.7	22.4	35.0	22.8	28.9	92.0	40.0	66.0	0.0	0.0	0.0	0.0	5.3	0.045	-	3.1	1.0	NE	29.1	29.0	30.4	31.0	31.5
10/19/2012	33.8	23.2	28.5	22.0	35.1	21.5	28.3	92.0	35.0	63.5	0.0	0.0	0.0	0.0	3.9	0.045	-	3.6	0.0	C	29.4	30.0	30.1	30.6	31.4
10/20/2012	35.2	24.8	30.0	24.2	35.0	22.3	28.7	94.0	30.0	62.0	0.0	0.0	0.0	0.0	4.5	0.045	-	3.6	0.0	C	30.6	30.8	30.5	31.0	31.4

Date	Temperature Air Max	Temperature Air Minimum	Temperature Air Average	Temperature Grass minimum	Temperture Water Maximum	Temperature Water Minimum	Temperature Water Average	RH Maximum	RH Minimum	Average	Rain '07.00-19.00	Rain '19.00-07.00	24 hrs.	Rain Max/15 Min	Evaporation(mm)	Dew	Wind run at 50 cm. (Km/day)	Wind run at 2 m (Km/day)	Mean wind	Direction	Temperature Soil at 0 cm	Temperature Soil at 5 cm	Temperature Soil at 10 cm	Temperature Soil at 20 cm	Temperature Soil at 50 cm
10/21/2012	35.8	25.0	30.4	23.9	36.5	23.1	29.8	93.0	40.0	66.5	0.0	0.0	0.0	0.0	4.8	0.045	-	2.9	0.0	C	30.6	30.5	30.8	31.2	31.5
10/22/2012	34.7	25.3	30.0	24.0	34.0	24.0	29.0	84.0	24.0	54.0	0.0	0.0	0.0	0.0	5.3	0.045	-	3.7	0.0	C	30.0	30.4	30.7	31.1	31.7
10/23/2012	33.8	23.3	28.6	23.0	34.0	23.0	28.5	91.0	31.0	61.0	0.0	0.0	0.0	0.0	3.3	0.045	-	2.3	1.0	NNE	28.5	29.9	30.2	30.6	31.6
10/24/2012	34.3	24.5	29.4	23.5	35.0	23.0	29.0	92.0	36.0	64.0	0.0	2.6	2.6	0.0	5.5	0.045	-	3.6	1.0	NE	28.3	28.7	30.2	30.3	31.6
10/25/2012	34.3	23.6	29.0	23.2	34.5	22.5	28.5	31.0	92.0	61.5	0.0	0.0	0.0	0.0	3.4	0.045	-	2.1	0.0	C	28.5	29.6	29.9	30.4	31.6
10/26/2012	34.8	24.6	29.7	23.9	34.5	22.0	28.3	94.0	28.0	61.0	0.0	0.0	0.0	0.0	4.4	0.045	-	1.2	0.0	C	29.8	29.5	30.2	30.5	31.5
10/27/2012	35.0	24.6	29.8	24.5	36.0	23.0	29.5	92.0	40.0	66.0	0.0	0.0	0.0	0.0	4.9	0.045	-	3.1	0.0	C	29.8	29.5	30.5	30.6	31.6
10/28/2012	35.4	24.9	30.2	23.1	35.4	24.0	29.7	92.0	31.0	61.5	0.0	0.0	0.0	0.0	3.5	0.045	-	1.6	0.0	C	28.2	29.2	30.4	30.7	31.7
10/29/2012	35.8	25.2	30.5	25.0	35.5	24.2	29.9	31.0	93.0	62.0	0.0	0.0	0.0	0.0	4.8	0.020	-	1.2	0.0	C	29.9	30.1	30.7	31.0	31.7
10/30/2012	34.1	25.5	29.8	24.9	33.2	24.7	29.0	92.0	44.0	68.0	8.2	25.4	33.6	0.0	5.6	0.045	-	3.8	0.0	C	29.4	29.6	30.5	30.7	31.8
10/31/2012	31.0	24.1	27.6	24.1	32.0	24.8	28.4	94.0	55.0	74.5	9.5	0.0	9.5	0.0	2.4	R	-	3.0	1.0	N	26.9	27.6	29.0	29.4	31.5
Average	34.0	24.7	29.4	24.1	34.0	23.0	28.5	89.3	46.4	65.6	37.1	91.4	128.5	0.0	4.2	0.044	-	2.9	0.1	-	29.2	29.6	30.1	30.4	31.3

ข้อมูลอุตุนิยมวิทยา เดือนพฤศจิกายน/2012

Date	Temperature Air Max	Temperature Air Minimum	Temperature Air Average	Temperature Grass minimum	Temperture Water Maximum	Temperature Water Minimu	Temperature Water Average	RH Maximum	RH Minimum	Average	Rain '07.00-19.00	Rain '19.00-07.00	24 hrs.	Rain Max/15 Min	Evaporation(mm)	Dew	Wind rum at 50 cm. (Km/da	Wind rum at 2 m (Km/day)	Mean wind	Direction	Temperature Soil at 0 cm	Temperature Soil at 5 cm	Temperature Soil at 10 cm	Temperature Soil at 20 cm	Temperature Soil at 50 cm
11/1/2012	32.6	22.8	27.7	22.6	31.5	21.5	26.5	92.0	28.0	60.0	0.0	0.0	0.0	0.0	4.3	0.000	-	4.1	0.0	C	27.2	28.0	28.8	29.6	31.2
11/2/2012	33.0	22.4	27.7	22.0	34.0	22.2	28.1	92.0	50.0	71.0	0.0	0.0	0.0	0.0	4.8	0.045	-	3.1	1.0	N	26.9	27.3	29.1	29.5	31.2
11/3/2012	34.7	23.0	28.9	22.5	34.0	22.0	28.0	92.0	29.0	60.5	0.0	0.0	0.0	0.0	3.8	0.045	-	1.6	0.0	C	28.5	29.1	29.5	29.8	31.1
11/4/2012	35.0	23.5	29.3	23.0	33.5	22.0	27.8	96.0	29.0	62.5	0.0	0.0	0.0	0.0	4.1	0.045	-	3.7	0.0	C	29.6	28.6	29.7	30.0	31.1
11/5/2012	35.5	24.3	29.9	24.0	36.0	24.0	30.0	94.0	35.0	64.5	0.0	0.0	0.0	0.0	4.9	0.045	-	2.1	0.0	C	29.7	29.8	30.2	30.6	31.2
11/6/2012	35.5	24.3	29.9	24.0	35.5	24.0	29.8	64.0	54.0	59.0	0.0	0.0	0.0	0.0	4.8	0.045	-	1.4	0.0	C	29.9	30.4	30.4	30.8	31.4
11/7/2012	35.3	24.1	29.7	24.0	34.8	24.0	29.4	94.0	32.0	63.0	0.0	0.0	0.0	0.0	3.8	0.045	-	2.5	0.0	C	29.9	30.2	30.6	30.8	31.5
11/8/2012	35.5	25.0	30.3	24.9	36.2	25.3	30.8	94.0	36.0	65.0	0.0	0.0	0.0	0.0	4.2	0.045	-	2.2	0.0	C	30.6	30.4	30.9	31.2	31.8
11/9/2012	36.0	25.0	30.5	24.6	34.5	23.0	28.8	97.0	35.0	66.0	0.0	0.0	0.0	0.0	4.4	0.045	-	1.4	0.0	C	29.9	30.6	30.7	31.1	31.8
11/10/2012	36.2	25.0	30.6	24.6	35.1	24.0	29.6	98.0	35.0	66.5	0.0	0.0	0.0	0.0	4.0	0.045	-	2.4	0.0	C	30.9	30.3	30.8	31.0	31.8
11/11/2012	36.5	25.0	30.8	24.1	37.0	25.2	31.1	94.0	50.0	72.0	0.6	10.2	10.8	0.0	5.7	0.045	-	3.3	0.0	C	30.4	30.3	31.0	31.2	32.0
11/12/2012	31.6	24.2	27.9	23.8	32.2	24.4	28.3	96.0	54.0	75.0	0.0	0.2	0.2	0.0	6.1	R	-	3.3	2.0	ENE	28.3	29.1	30.1	30.4	32.0
11/13/2012	34.0	23.4	28.7	23.3	32.8	23.4	28.1	94.0	36.0	65.0	0.0	0.0	0.0	0.0	2.6	R+D	-	4.1	0.0	C	28.8	28.9	30.0	30.3	31.8
11/14/2012	34.4	23.5	29.0	22.8	35.0	22.8	28.9	92.0	40.0	66.0	0.0	0.0	0.0	0.0	5.6	0.045	-	2.1	0.0	C	29.0	29.5	30.1	30.7	31.6
11/15/2012	35.0	25.0	30.0	23.9	34.2	23.5	28.9	95.0	30.0	62.5	0.0	0.0	0.0	0.0	4.1	0.045	-	2.1	0.0	C	29.0	29.4	30.0	30.3	31.7
11/16/2012	33.9	24.0	29.0	23.8	33.0	24.9	29.0	96.0	29.0	62.5	0.0	0.0	0.0	0.0	4.1	0.045	-	4.3	1.0	N	29.0	29.2	29.9	29.7	31.6
11/17/2012	34.0	25.6	29.8	25.4	32.0	24.0	28.0	88.0	37.0	62.5	2.0	0.0	2.0	0.0	3.8	0.020	-	4.1	0.0	C	28.5	28.8	29.9	30.2	31.5
11/18/2012	32.5	23.7	28.1	23.6	33.0	23.0	28.0	84.0	50.0	67.0	0.0	0.0	0.0	0.0	2.9	0.045	-	1.8	0.0	C	28.6	28.6	29.5	29.9	31.5
11/19/2012	33.5	23.6	28.6	23.4	32.5	23.5	28.0	94.0	40.0	67.0	0.0	0.0	0.0	0.0	2.7	0.045	-	3.8	0.0	C	28.7	29.1	29.6	29.9	31.4
11/20/2012	35.2	24.5	29.9	24.0	36.0	22.5	29.3	90.0	45.0	67.5	6.4	0.0	6.4	0.0	3.4	0.045	-	3.2	0.0	C	29.5	29.9	30.0	30.4	31.4

บทที่ 5 สรุปผลการทดลองและข้อเสนอแนะ

จากผลการศึกษาความสัมพันธ์ของชนิดและความเข้มข้นของกรดอินทรีย์ในบรรยากาศต่อการตกสะสมของสารกรดตั้งแต่เดือนสิงหาคม 2555 ถึงเดือนมกราคม 2556 ได้ผลสรุปดังต่อไปนี้

5.1 ค่าความเป็นกรด-ด่าง (pH) ของตัวอย่างน้ำฝนที่ทำการศึกษา อยู่ในช่วง 5.69-6.70 มีค่าเฉลี่ยเท่ากับ 6.50 ซึ่งสูงกว่าค่า pH ปกติของน้ำฝน (pH = 5.6) ดังนั้นตัวอย่างน้ำฝนดังกล่าวจึงไม่มีศักยภาพความเป็นกรด

5.2 อนินทรีย์อิออนหลักในตัวอย่างน้ำฝนที่ทำการศึกษา คือ Ca^{2+} และ NO_3^- คิดเป็น 24% และ 17% ของปริมาณอิออนรวมทั้งหมดตามลำดับ สำหรับกรดอินทรีย์ที่วิเคราะห์ในรูปอิออนลบรวมทั้งหมด 7 ชนิดจากตัวอย่างน้ำฝน 42 ตัวอย่าง มีสัดส่วน 16% ของปริมาณอิออนรวมทั้งหมด ซึ่งส่วนใหญ่เป็นกรดชนิดมอนอคาร์บอกซิลิก กรดอะซิติกและกรดฟอร์มิกเป็นกรดอินทรีย์หลักที่พบในน้ำฝน มีความเข้มข้นเฉลี่ยเท่ากับ 4.44 µmol/L และ 3.53 µmol/L ตามลำดับ คิดเป็น 32% และ 26% ของปริมาณกรดอินทรีย์ทั้งหมด เช่นเดียวกับในบรรยากาศ กรดอินทรีย์ที่พบส่วนใหญ่ ได้แก่ กรดฟอร์มิก รองลงมาคือ กรดอะซิติกซึ่งมีปริมาณเท่ากับกรดแลคติก กรดซัคซินิก กรดมาลิก กรดซิตริก และกรดทาร์ทาริก ตามลำดับ

5.3 แนวโน้มการเปลี่ยนแปลงความเข้มข้นของกรดอินทรีย์ตามฤดูกาล พบว่า กรดอินทรีย์ในน้ำฝนส่วนใหญ่มีความเข้มข้นสูงในช่วงฤดูหนาว (Dry season) และมีความเข้มข้นต่ำในช่วงฤดูฝน (Wet season) เนื่องมาจากผลของกรดอินทรีย์ถูกเจือจางในน้ำฝนที่ตกลงมาอย่างหนัก (Dilution effect) ซึ่งมีแนวโน้มเดียวกับผลวิเคราะห์การเปลี่ยนแปลงความเข้มข้นของกรดอินทรีย์ในบรรยากาศ

5.4 บทบาทของกรดอินทรีย์ต่อสมดุลอิออนบวกและอิออนลบในน้ำฝน พบว่าเมื่อนำกรดอินทรีย์เข้ามาคิดรวมในสมดุลอิออนในน้ำฝน มีผลทำให้ปริมาณอิออนลบเข้าใกล้อิออนบวกมากขึ้น มีผลทำให้ความแตกต่างระหว่างอิออนบวกและอิออนลบลดลงจากเดิม 24% เหลือเพียง 4% ซึ่งสามารถตรวจสอบจากผลพิจารณาความสัมพันธ์ระหว่างผลรวมอิออนบวกและอิออนลบ; R_1 (r^2 เท่ากับ 0.804) และเปรียบเทียบระหว่างค่าความนำไฟฟ้าที่วัดได้ (Measured conductance) และค่าความนำไฟฟ้าที่คำนวณได้ (Calculated conductance); R_2 (r^2 เท่ากับ 0.898)

5.5 อัตราส่วนระหว่างกรดฟอร์มิกและกรดอะซิติก (F/A) สภาวะแก๊สในบรรยากาศ มีค่าเท่ากับ 1.56 (F/A>1) ซึ่งผลของ F/A ในแก๊สมีค่ามากกว่า 1 บ่งชี้ว่า กรดอินทรีย์ที่ตรวจวัดได้มาจากปฏิกิริยาโฟโตเคมิคอล สอดคล้องกับเมื่อพิจารณาปฏิกิริยาการสลายตัวของกรดอินทรีย์ในบรรยากาศสภาวะ

สารละลาย โดยกรดฟอร์มิกซึ่งเป็นกรดอินทรีย์ที่พบมากในบรรยากาศสภาวะสารละลายสามารถเกิดจากการสลายตัวของกรดแลคติกและกรดทาร์ทาริกได้ ดังนั้นกรดฟอร์มิกซึ่งมีความเข้มข้นสูงกว่ากรดแลคติกและกรดทาร์ทาริก จึงสามารถสรุปได้ว่าแหล่งปล่อยหลักของกรดอินทรีย์ในบรรยากาศเป็นแบบทุติยภูมิ

5.6 ความสัมพันธ์ระหว่างทิศทางและความเร็วลมกับแหล่งปล่อยของกรดอินทรีย์ในบรรยากาศ พบว่า ทิศทางลมส่วนใหญ่พัดพามาจากทิศเหนือ ซึ่งทิศดังกล่าวเป็นที่ตั้งของแปลงทดลองกรมวิชาการ ซึ่งนับว่าเป็นแหล่งปล่อยกรดอินทรีย์ที่สำคัญจากดินและการเพาะปลูก ตลอดจนทิศทางลมบางส่วนที่พัดพามาจากทิศตะวันตกเฉียงใต้ ซึ่งเป็นที่ตั้งของศูนย์วิจัยพืชไร่ชัยนาท และทิศตะวันออกซึ่งมีถนนหมายเลข 311 (สิงห์บุรี-ชัยนาท) จึงคาดการณ์ได้ว่าแหล่งปล่อยกรดอินทรีย์อาจมาจากการปล่อยโดยตรงจากกิจกรรมการเกษตรและกิจกรรมของมนุษย์ตามลำดับ

ข้อเสนอแนะ

กรดอินทรีย์ที่มีบทบาทสำคัญต่อความเป็นกรดของน้ำฝน นอกเหนือจากกรดมอนอคาร์บอกซิลิก เช่น กรดฟอร์มิก กรดอะซิติก ที่พบมากในน้ำฝนแล้ว ยังพบอีกว่ากรดไดคาร์บอกซิลิกบางตัว เช่น กรดออกซาลิก และกรดซัคซินิก ซึ่งเป็น metabolic intermediates ที่สำคัญอาจมาจากทั้งแหล่งปล่อยปฐมภูมิ (การจราจร, การเผาไหม้ถ่านหิน) และแหล่งปล่อยทุติยภูมิ (ปฏิกิริยาเคมีของแก๊สในบรรยากาศ)ได้ เนื่องจากมีการศึกษาพบว่า มีความสัมพันธ์เกิดขึ้นจากการสลายตัวทางปฏิกิริยาโฟโตเคมิคัลของกรดซัคซินิกไปเป็นกรดมาโลนิกและเปลี่ยนรูปเป็นกรดออกซาลิกต่อไป นอกจากนี้อัตราส่วนระหว่างกรดมาโลนิกต่อกรดซัคซินิก ยังสามารถบ่งบอกถึงแหล่งปล่อยของกรดอินทรีย์เหล่านี้ได้ โดยชี้ให้เห็นถึงแหล่งปล่อยจากกิจกรรมของมนุษย์โดยตรงและแหล่งปล่อยจากกระบวนการทุติยภูมิ ดังนั้นจึงควรมีการศึกษาวิเคราะห์กรดไดคาร์บอกซิลิกเหล่านี้เพิ่มมากขึ้น เพื่อนำไปสู่ความสัมพันธ์ของแหล่งปล่อยของกรดอินทรีย์ซึ่งมีบทบาทสำคัญต่อคุณสมบัติทางเคมีของน้ำฝน

Date	Temperature Air Max	Temperature Air Minimum	Temperature Air Average	Temperature Grass minimum	Temperture Water Maximum	Temperature Water Minimum	Temperature Water Average	RH Maximum	RH Minimum	Average	Rain '07.00-19.00	Rain '19.00-07.00	24 hrs.	Rain Max/15 Min	Evaporation(mm)	Dew	Wind rum at 50 cm. (Km/day)	Wind rum at 2 m (Km/day)	Mean wind	Direction	Temperature Soil at 0 cm	Temperature Soil at 5 cm	Temperature Soil at 10 cm	Temperature Soil at 20 cm	Temperature Soil at 50 cm
11/21/2012	35.6	25.0	30.3	24.5	34.0	23.0	28.5	90.0	55.0	72.5	0.0	0.0	0.0	0.0	5.4	0.045	-	2.5	1.0	SSW	29.4	29.9	30.3	30.6	31.5
11/22/2012	35.5	24.4	30.0	24.0	33.5	22.5	28.0	94.0	36.0	65.0	0.0	0.0	0.0	0.0	3.7	0.020	-	4.0	0.0	C	30.1	30.6	30.5	30.9	31.5
11/23/2012	36.0	24.7	30.4	24.6	36.5	24.8	30.7	93.0	38.0	65.5	0.0	0.0	0.0	0.0	4.2	0.045	-	2.4	0.0	C	30.3	31.1	30.9	31.3	31.6
11/24/2012	35.9	25.0	30.5	24.8	34.8	24.8	29.8	96.0	39.0	67.5	8.0	0.0	8.0	0.0	4.4	0.045	-	3.8	0.0	C	28.0	28.8	30.2	30.6	31.7
11/25/2012	33.0	24.0	28.5	24.0	33.5	22.8	28.2	94.0	57.0	75.5	0.0	0.0	0.0	0.0	2.5	0.020	-	2.8	0.0	C	28.3	28.4	29.7	30.2	31.6
11/26/2012	35.3	23.7	29.5	23.0	35.0	22.5	28.8	98.0	33.0	65.5	0.0	0.0	0.0	0.0	3.8	0.045	-	3.1	0.0	C	29.7	29.6	30.3	30.6	31.5
11/27/2012	35.4	24.7	30.1	24.0	35.5	22.5	29.0	98.0	34.0	66.0	0.0	0.0	0.0	0.0	4.0	0.045	-	2.4	0.0	C	29.7	30.5	30.4	30.8	31.5
11/28/2012	30.9	25.0	28.0	24.5	30.5	22.5	26.5	94.0	54.0	74.0	0.0	0.0	0.0	0.0	3.5	0.020	-	2.6	0.0	C	27.4	27.6	29.5	29.9	31.5
11/29/2012	32.9	24.0	28.5	23.8	33.5	22.0	27.8	90.0	50.0	70.0	0.0	0.0	0.0	0.0	3.2	0.045	-	2.2	0.0	C	28.2	28.2	29.3	30.1	31.3
11/30/2012	34.7	24.9	29.8	24.0	33.8	22.3	28.1	96.0	38.0	67.0	0.0	0.0	0.0	0.0	2.2	0.045	-	1.7	0.0	C	29.9	30.2	29.6	30.2	31.1
Average	34.5	24.2	29.4	23.9	34.1	23.3	28.7	92.6	40.3	66.5	17.0	10.4	27.4	0.0	4.0	0.040	-	2.8	0.2	-	29.1	29.4	30.1	30.4	31.5

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Date	Temperature Air Max	Temperature Air Minimum	Temperature Air Average	Temperature Grass minimur	Temperture Water Maximur	Temperature Water Minimu	Temperature Water Average	RH Maximum	RH Minimum	Average	Rain '07.00-19.00	Rain '19.00-07.00	24 hrs.	Rain Max/15 Min	Evaporation(mm)	Dew	Wind rum at 50 cm. (Km/da	Wind rum at 2 m (Km/day)	Mean wind	Direction	Temperature Soil at 0 cm	Temperature Soil at 5 cm	Temperature Soil at 10 cm	Temperature Soil at 20 cm	Temperature Soil at 50 cm
12/1/2012	34.5	25.0	29.8	23.8	34.5	22.2	28.4	96.0	37.0	66.5	0.0	0.0	0.0	0.0	4.6	0.075	-	3.2	0.0	C	30.0	29.8	30.1	30.3	31.2
12/2/2012	35.5	25.4	30.5	24.9	36.0	22.5	29.3	92.0	40.0	66.0	0.0	0.0	0.0	0.0	3.2	0.045	-	2.1	0.0	C	29.5	29.9	30.3	30.8	31.3
12/3/2012	35.7	24.5	30.1	23.0	34.7	22.0	28.4	92.0	50.0	71.0	0.0	0.0	0.0	0.0	4.8	0.045	-	1.7	0.0	C	29.5	30.0	30.1	30.4	31.4
12/4/2012	34.8	25.7	30.3	24.8	33.5	23.0	28.3	94.0	40.0	67.0	0.0	0.0	0.0	0.0	2.2	0.045	-	3.4	0.0	C	30.0	30.4	30.4	30.6	31.4
12/5/2012	35.0	25.2	30.1	23.9	36.0	24.8	30.4	88.0	40.0	64.0	0.0	0.0	0.0	0.0	5.3	0.045	-	2.3	1.0	S	30.0	30.3	30.5	31.0	31.5
12/6/2012	34.0	25.4	29.7	24.1	34.8	22.0	28.4	91.0	38.0	64.5	0.0	0.0	0.0	0.0	3.4	0.045	-	1.9	0.0	C	29.2	29.7	30.1	30.4	31.4
12/7/2012	34.2	25.0	29.6	24.0	32.5	24.8	28.7	92.0	36.0	64.0	0.0	0.0	0.0	0.0	3.7	0.045	-	3.1	0.0	C	28.6	28.9	29.9	29.9	31.3
12/8/2012	35.8	24.1	30.0	23.0	36.0	24.0	30.0	92.0	35.0	63.5	0.0	0.0	0.0	0.0	4.2	0.045	-	2.1	0.0	C	28.8	29.3	29.9	30.2	31.4
12/9/2012	33.8	23.5	28.7	22.0	33.4	22.5	28.0	93.0	38.0	65.5	0.0	0.0	0.0	0.0	2.9	0.045	-	1.7	0.0	C	28.5	29.0	29.4	29.8	31.3
12/10/2012	35.0	24.0	29.5	23.3	33.0	23.5	28.3	92.0	27.0	59.5	0.0	0.0	0.0	0.0	3.4	0.045	-	3.9	1.0	SSE	28.8	28.8	29.5	30.0	31.0
12/11/2012	34.8	23.8	29.3	22.8	34.0	23.8	28.9	96.0	30.0	63.0	0.0	0.0	0.0	0.0	3.7	0.045	-	2.2	0.0	C	27.5	28.7	29.8	30.3	31.0
12/12/2012	32.6	24.3	28.5	23.0	33.0	23.5	28.3	92.0	40.0	66.0	0.0	0.0	0.0	0.0	3.1	0.020	-	2.1	0.0	C	27.8	27.8	29.3	29.7	31.0
12/13/2012	33.3	23.0	28.2	21.5	32.0	21.5	26.8	99.0	31.0	65.0	0.0	0.0	0.0	0.0	2.7	0.045	-	2.8	0.0	C	27.8	28.2	29.1	29.5	31.0
12/14/2012	34.4	23.0	28.7	22.8	35.5	22.2	28.9	92.0	45.0	68.5	0.0	0.0	0.0	0.0	5.0	0.045	-	2.4	0.0	C	28.1	28.7	28.9	29.8	31.0
12/15/2012	34.0	23.0	28.5	22.0	33.0	23.0	28.0	96.0	35.0	65.5	0.0	0.0	0.0	0.0	3.9	0.045	-	3.4	2.0	NW	28.0	28.8	28.4	29.2	30.8
12/16/2012	34.0	23.3	28.7	22.5	32.5	22.5	27.5	94.0	28.0	61.0	0.0	0.0	0.0	0.0	4.3	0.020	-	2.7	2.0	NNW	28.3	28.3	28.7	29.2	30.4
12/17/2012	34.5	22.4	28.5	20.0	35.5	22.2	28.9	92.0	40.0	66.0	0.0	0.0	0.00	0.0	4.3	0.045	-	2.7	0.0	C	27.8	28.4	28.4	28.9	31.0
12/18/2012	34.2	22.2	28.2	20.5	32.8	21.8	27.3	96.0	29.0	62.5	0.0	0.0	0.0	0.0	3.0	0.045	-	3.7	2.0	NW	28.2	28.8	28.5	28.8	30.5
12/19/2012	34.8	22.5	28.7	21.5	32.8	21.5	27.2	94.0	32.0	63.0	0.0	0.0	0.0	0.0	4.2	0.020	-	4.1	1.0	NE	28.9	28.4	28.8	29.0	30.3
12/20/2012	35.2	23.0	29.1	21.0	36.0	21.5	28.8	92.0	40.0	66.0	0.0	0.0	0.0	0.0	4.8	0.045	-	2.2	0.0	C	29.3	29.0	29.0	29.3	30.3

Date	Temperature Air Max	Temperature Air Minimum	Temperature Air Average	Temperature Grass minimum	Temperture Water Maximum	Temperature Water Minimum	Temperature Water Average	RH Maximum	RH Minimum	Average	Rain '07.00-19.00	Rain '19.00-07.00	24 hrs.	Rain Max/15 Min	Evaporation(mm)	Dew	Wind run at 50 cm. (Km/day)	Wind run at 2 m (Km/day)	Mean wind	Direction	Temperature Soil at 0 cm	Temperature Soil at 5 cm	Temperature Soil at 10 cm	Temperature Soil at 20 cm	Temperature Soil at 50 cm
12/21/2012	35.0	22.5	28.8	21.0	34.0	21.0	27.5	96.0	27.0	61.5	0.0	0.0	0.0	0.0	4.0	0.045	-	4.4	0.0	C	28.2	29.1	28.8	29.2	30.4
12/22/2012	35.6	22.3	29.0	20.8	36.0	21.8	28.9	92.0	35.0	63.5	0.0	0.0	0.0	0.0	4.2	0.020	-	2.6	0.0	C	28.0	27.8	28.8	29.1	30.5
12/23/2012	34.0	23.0	28.5	21.0	35.0	22.0	28.5	86.0	35.0	60.5	0.0	0.0	0.0	0.0	3.9	0.020	-	2.4	0.0	C	27.9	28.4	28.6	28.9	30.3
12/24/2012	31.0	20.5	25.8	19.0	33.0	20.0	26.5	94.0	25.0	59.5	0.0	0.0	0.0	0.0	4.0	0.000	-	5.3	2.0	N	25.4	26.4	27.4	27.9	30.2
12/25/2012	30.7	19.5	25.1	17.4	32.5	22.0	27.3	94.0	25.0	59.5	0.0	0.0	0.0	0.0	4.0	0.010	-	4.6	1.0	NE	25.3	25.2	26.7	27.1	30.0
12/26/2012	31.7	21.7	26.7	20.4	32.0	21.0	26.5	92.0	30.0	61.0	0.0	0.0	0.0	0.0	2.8	0.020	-	2.2	0.0	C	26.5	26.6	27.3	27.7	29.9
12/27/2012	33.6	19.5	26.6	19.5	32.7	21.4	27.1	92.0	30.0	61.0	0.0	0.0	0.0	0.0	4.6	0.020	-	4.1	0.0	C	27.4	27.8	27.7	28.0	29.7
12/28/2012	35.0	22.0	28.5	21.7	32.5	20.0	26.3	92.0	32.0	62.0	0.0	0.0	0.0	0.0	3.7	0.045	-	2.4	0.0	C	27.9	27.1	28.2	28.4	29.7
12/29/2012	34.5	22.1	28.3	20.8	35.0	20.0	27.5	92.0	30.0	61.0	0.0	0.0	0.0	0.0	4.4	0.020	-	3.0	0.0	C	29.1	27.8	28.5	29.0	29.8
12/30/2012	35.9	22.2	29.1	21.0	33.2	20.5	26.9	89.0	30.0	59.5	0.0	0.0	0.0	0.0	5.2	0.045	-	5.4	0.0	C	28.3	27.9	28.1	28.5	29.8
12/31/2012	29.2	19.6	24.4	19.0	32.5	21.0	26.8	92.0	34.0	63.0	0.0	0.0	0.0	0.0	2.9	0.045	-	3.9	3.0	N	25.0	25.9	27.5	28.0	29.3
Average	34.1	23.0	28.5	21.8	33.9	22.1	28.0	92.8	34.3	63.5	0.0	0.0	0.0	0.0	3.9	0.037	-	3.0	0.5	-	28.2	28.4	28.9	29.3	30.6

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Date	Temperature Air Max	Temperature Air Minimum	Temperature Air Average	Temperature Grass minimum	Temperture Water Maximum	Temperature Water Minimum	Temperature Water Average	RH Maximum	RH Minimum	Average	Rain '07.00-19.00	Rain '19.00-07.00	24 hrs.	Rain Max/15 Min	Evaporation(mm)	Dew	Wind rum at 50 cm. (Km/da	Wind rum at 2 m (Km/day)	Mean wind	Direction	Temperature Soil at 0 cm	Temperature Soil at 5 cm	Temperature Soil at 10 cm	Temperature Soil at 20 cm	Temperature Soil at 50 cm
1/1/2013	29.5	17.0	23.3	16.5	31.0	18.0	24.5	96.0	28.0	62.0	0.0	0.0	0.0	0.0	2.9	0.045	-	2.7	1.0	N	24.5	25.8	26.5	27.2	29.5
1/2/2013	34.0	17.6	25.8	17.3	35.0	18.0	26.5	92.0	30.0	61.0	0.0	0.0	0.0	0.0	2.5	0.045	-	2.1	0.0	C	26.0	25.7	26.6	27.0	29.2
1/3/2013	34.2	19.5	26.9	18.8	32.0	20.0	26.0	98.0	23.0	60.5	0.0	0.0	0.0	0.0	5.2	0.045	-	2.7	0.0	C	28.0	27.4	27.3	27.7	29.0
1/4/2013	33.7	19.4	26.6	18.2	31.8	18.0	24.9	92.0	32.0	62.0	0.0	0.0	0.0	0.0	4.6	0.045	-	5.7	1.0	N	26.4	27.5	27.3	27.8	29.1
1/5/2013	33.2	20.0	26.6	18.4	34.0	18.0	26.0	92.0	40.0	66.0	0.0	0.0	0.0	0.0	3.9	0.045	-	2.3	0.0	C	26.4	26.3	27.2	27.6	29.1
1/6/2013	31.6	20.4	26.0	18.2	32.2	18.5	25.4	96.0	32.0	64.0	0.0	0.0	0.0	0.0	4.2	0.045	-	3.6	1.0	SSE	26.0	26.7	27.1	27.5	29.0
1/7/2013	33.8	19.5	26.7	17.2	32.0	19.7	25.9	94.0	25.0	59.5	0.0	0.0	0.0	0.0	4.5	0.045	-	4.0	1.0	ESE	26.2	27.2	26.8	27.6	28.9
1/8/2013	34.8	20.1	27.5	18.2	33.8	19.0	26.4	94.0	20.0	57.0	0.0	0.0	0.0	0.0	4.8	0.045	-	4.1	1.0	NNW	26.7	27.5	27.0	27.7	28.9
1/9/2013	34.9	21.0	28.0	18.8	35.2	18.8	27.0	90.0	35.0	62.5	0.0	0.0	0.0	0.0	3.3	0.045	-	2.1	0.0	C	26.6	27.0	27.2	27.5	28.9
1/10/2013	34.5	20.9	27.7	19.0	35.0	19.0	27.0	92.0	40.0	66.0	0.0	0.0	0.0	0.0	2.5	0.045	-	1.7	0.0	C	26.3	26.7	27.2	27.5	29.0
1/11/2013	32.9	20.8	26.9	20.0	33.5	20.0	26.8	94.0	40.0	67.0	0.0	0.0	0.0	0.0	3.2	0.045	-	2.5	0.0	C	26.6	26.6	27.4	27.6	29.0
1/12/2013	33.7	22.5	28.1	20.5	33.2	21.0	27.1	96.0	29.0	62.5	0.0	0.0	0.0	0.0	4.3	0.045	-	2.3	0.0	C	27.2	27.2	27.7	27.9	29.0
1/13/2013	32.9	20.0	26.5	17.6	33.5	19.2	26.4	94.0	30.0	62.0	0.0	0.0	0.0	0.0	3.9	0.020	-	1.4	0.0	C	26.8	26.4	27.3	27.7	29.0
1/14/2013	32.6	19.4	26.0	17.0	32.1	18.5	25.3	93.0	24.0	58.5	0.0	0.0	0.0	0.0	3.4	0.045	-	1.6	0.0	C	24.8	25.3	27.0	27.4	29.0
1/15/2013	33.5	19.2	26.4	17.2	32.0	18.5	25.3	94.0	45.0	69.5	0.0	0.0	0.0	0.0	4.9	0.045	-	2.8	0.0	C	26.1	27.1	26.7	27.1	28.9
1/16/2013	33.8	20.0	26.9	19.7	32.0	21.0	26.5	95.0	20.0	57.5	0.0	0.0	0.0	0.0	3.9	0.045	-	1.5	0.0	NE	26.9	28.2	27.4	27.8	28.6
1/17/2013	33.5	21.2	27.4	18.5	31.0	18.0	24.5	96.0	20.0	58.0	0.0	0.0	0.00	0.0	5.1	0.045	-	2.6	1.0	NE	26.5	26.7	28.6	29.0	28.8
1/18/2013	33.2	20.6	26.9	18.4	32.2	18.0	25.1	76.0	18.0	47.0	0.0	0.0	0.0	0.0	4.8	0.020	-	2.4	2.0	C	25.8	26.4	26.8	27.2	29.0
1/19/2013	31.8	18.1	25.0	15.0	33.0	22.2	27.6	86.0	30.0	58.0	0.0	0.0	0.0	0.0	4.2	0.045	-	2.9	0.0	S	24.9	26.8	26.4	26.9	28.8
1/20/2013	32.9	17.2	25.1	15.5	29.9	20.0	25.0	96.0	18.0	57.0	0.0	0.0	0.0	0.0	3.3	0.045	-	1.8	1.0	C	25.2	26.2	26.1	26.6	28.6

Date	Temperature Air Max	Temperature Air Minimum	Temperature Air Average	Temperature Grass minimum	Temperture Water Maximum	Temperature Water Minimum	Temperature Water Average	RH Maximum	RH Minimum	Average	Rain '07.00-19.00	Rain '19.00-07.00	24 hrs.	Rain Max/15 Min	Evaporation(mm)	Dew	Wind run at 50 cm. (Km/day)	Wind run at 2 m (Km/day)	Mean wind	Direction	Temperature Soil at 0 cm	Temperature Soil at 5 cm	Temperature Soil at 10 cm	Temperature Soil at 20 cm	Temperature Soil at 50 cm
1/21/2013	34.4	19.2	26.8	17.4	31.2	18.7	25.0	95.0	38.0	66.5	0.0	0.0	0.0	0.0	4.5	0.045	-	3.0	0.0	C	26.3	26.4	26.1	26.4	28.4
1/22/2013	35.2	22.0	28.6	19.5	35.5	19.5	27.5	92.0	30.0	61.0	0.0	0.0	0.0	0.0	4.0	0.045	-	2.1	0.0	C	27.9	27.2	27.1	27.6	28.6
1/23/2013	34.0	21.9	28.0	20.1	31.8	20.0	25.9	98.0	48.0	73.0	0.0	0.0	0.0	0.0	2.4	0.045	-	1.4	0.0	C	28.3	27.7	27.6	27.8	28.5
1/24/2013	34.2	23.2	28.7	21.6	35.0	19.0	27.0	98.0	42.0	70.0	0.0	0.0	0.0	0.0	4.6	0.045	-	2.6	0.0	C	25.7	27.7	28.1	28.2	28.8
1/25/2013	34.4	24.4	29.4	23.0	32.4	22.0	27.2	98.0	59.0	78.5	0.0	1.3	1.3	0.0	2.5	0.045	-	4.7	1.0	SE	28.9	29.6	28.6	28.6	29.0
1/26/2013	33.6	23.0	28.3	22.2	34.2	22.0	28.1	98.0	48.0	73.0	0.0	0.0	0.0	0.0	4.7	0.045	-	3.2	0.0	C	28.8	28.2	28.5	28.8	29.1
1/27/2013	34.2	24.0	29.1	22.5	32.2	22.0	27.1	98.0	39.0	68.5	0.0	0.0	0.0	0.0	4.1	0.020	-	3.5	2.0	N	27.5	27.9	28.5	28.8	29.2
1/28/2013	30.8	24.7	27.8	24.5	31.2	22.0	26.6	95.0	50.0	72.5	0.0	0.0	0.0	0.0	3.7	0.000	-	3.4	3.0	N	27.5	28.0	28.4	28.6	29.3
1/29/2013	32.0	20.0	26.0	21.8	32.5	19.8	26.2	94.0	45.0	69.5	0.0	0.0	0.0	0.0	3.9	0.000	-	2.1	0.0	C	27.1	27.2	27.9	28.3	29.4
1/30/2013	33.0	22.5	27.8	21.0	31.0	20.0	25.5	94.0	37.0	65.5	0.0	0.0	0.0	0.0	3.8	0.020	-	1.8	1.0	N	27.8	28.4	27.9	28.2	29.4
1/31/2013	32.5	23.0	27.8	22.6	30.8	19.5	25.2	98.0	38.0	68.0	0.0	13.9	13.9	0.0	5.1	0.020	-	3.5	2.0	N	27.3	27.1	28.0	28.2	29.3
Average	33.3	20.7	27.0	19.2	32.7	19.6	26.1	94.0	34.0	64.0	0.0	15.2	15.2	0.0	4.0	0.038	-	2.7	0.6	-	26.7	27.1	27.4	27.7	29.0

ภาคผนวก ข

ข้อมูลผลการวิเคราะห์ตัวอย่างน้ำฝน

(Wet Form A)

Form (Wet A) No.1 **Results of wet deposition analysis (Anion)**

Site name : Chainart agrometeorological station, Chainart

Funnel diameter : 288 (mm)

Name of Laboratory : King Mongkut's University of Technology Thonburi

Sample No.	Sampling period				SO_4^{2-}	flg1	flg2	flg3	NO_3^-	flg1	flg2	flg3	Cl^-	flg1	flg2	flg3	$HCOO^-$	flg1	flg2	flg3	CH_3COO^-	flg1	flg2	flg3	PO_4^{3-}	flg1	flg2	flg3
	Start		End																								
	Date	Time	Date	Time	umol/l				umol/l				umol/l				umol/l				umol/l				umol/l			
1	8/1/2012	9:00	8/2/2012	9:00																								
2	8/2/2012	9:00	8/3/2012	9:00																								
3	8/3/2012	9:00	8/4/2012	9:00	15.38				24.97				93.93				8.62				2.71				0.00			
4	8/4/2012	9:00	8/5/2012	9:00																								
5	8/5/2012	9:00	8/6/2012	9:00																								
6	8/6/2012	9:00	8/7/2012	9:00																								
7	8/7/2012	9:00	8/8/2012	9:00																								
8	8/8/2012	9:00	8/9/2012	9:00																								
9	8/9/2012	9:00	8/10/2012	9:00	4.67				8.38				13.73				0.16				2.67				0.00			
10	8/10/2012	9:00	8/11/2012	9:00																								
11	8/11/2012	9:00	8/12/2012	9:00																								
12	8/12/2012	9:00	8/13/2012	9:00																								
13	8/13/2012	9:00	8/14/2012	9:00	9.79				8.66				17.72				0.31				3.69				0.00			
14	8/14/2012	9:00	8/15/2012	9:00	2.43				3.42				3.98				0.59				3.85				0.00			
15	8/15/2012	9:00	8/16/2012	9:00																								
16	8/16/2012	9:00	8/17/2012	9:00																								
17	8/17/2012	9:00	8/18/2012	9:00																								
18	8/18/2012	9:00	8/19/2012	9:00	7.65				9.39				12.93				0.42				8.54				0.00			
19	8/19/2012	9:00	8/20/2012	9:00	6.64				5.95				6.05				0.69				8.71				0.00			
20	8/20/2012	9:00	8/21/2012	9:00	2.75				5.25				3.67				0.38				9.42				0.00			
21	8/21/2012	9:00	8/22/2012	9:00																								
22	8/22/2012	9:00	8/23/2012	9:00																								
23	8/23/2012	9:00	8/24/2012	9:00																								
24	8/24/2012	9:00	8/25/2012	9:00																								

Form (Wet A) No.1 Results of wet deposition analysis (Anion)

Site name : Chainart agrometeorological station, Chainart

Funnel diameter : 288 (mm)

Name of Laboratory : King Mongkut's University of Technology Thonburi

Sample No.	Sampling period				SO_4^{2-}	flg1	flg2	flg3	NO_3^-	flg1	flg2	flg3	Cl^-	flg1	flg2	flg3	$HCOO^-$	flg1	flg2	flg3	CH_3COO^-	flg1	flg2	flg3	PO_4^{3-}	flg1	flg2	flg3
	Start		End																								
	Date	Time	Date	Time	umol/l				umol/l				umol/l				umol/l				umol/l				umol/l			
25	8/25/2012	9:00	8/26/2012	9:00	4.20				8.55				3.79				0.34				1.80				0.00			
26	8/26/2012	9:00	8/27/2012	9:00	3.44				3.47				1.98				0.17				2.00				0.00			
27	8/27/2012	9:00	8/28/2012	9:00																								
28	8/28/2012	9:00	8/29/2012	9:00	5.69				13.42				7.04				0.20				3.51				0.00			
29	8/29/2012	9:00	8/30/2012	9:00																								
30	8/30/2012	9:00	8/31/2012	9:00	4.78				7.74				8.01				0.15				3.80				0.00			
31	8/31/2012	9:00	9/1/2012	9:00																								

Form (Wet A) No.1 (Cont.) **Results of wet deposition analysis (Anion)**

Sample No.	$C_3H_5O(COO)_3^{3-}$ umol/l	flg1	flg2	flg3	$C_4H_4O_6^{2-}$ umol/l	flg1	flg2	flg3	$C_4H_4O_5^{2-}$ umol/l	flg1	flg2	flg3	$C_4H_4O_4^{2-}$ umol/l	flg1	flg2	flg3	$C_3H_5O_3^{-}$ umol/l
1																	
2																	
3	0.23				0.26				0.25				7.68				21.46
4																	
5																	
6																	
7																	
8																	
9	0.25				0.29				0.32				2.89				1.00
10																	
11																	
12																	
13	0.18				0.63				0.27				1.14				4.35
14	0.70				2.82				0.63				1.94				0.80
15																	
16																	
17																	
18	0.71				1.46				0.73				1.76				1.18
19	0.27				3.15				0.84				6.03				4.08
20	0.15				0.16				1.41				2.48				1.25
21																	
22																	
23																	
24																	

Form (Wet A) No.1 (Cont.) **Results of wet deposition analysis (Anion)**

Sample No.	$C_3H_5O(COO)_3^{3-}$ umol/l	flg1	flg2	flg3	$C_4H_4O_6^{2-}$ umol/l	flg1	flg2	flg3	$C_4H_4O_5^{2-}$ umol/l	flg1	flg2	flg3	$C_4H_4O_4^{2-}$ umol/l	flg1	flg2	flg3	$C_3H_5O_3^{-}$ umol/l
25	0.64				0.74				0.15				0.98				0.60
26	0.49				0.79				0.43				2.98				0.78
27																	
28	0.74				0.65				0.28				2.32				1.32
29	0.00				0.00				0.00				0.00				0.00
30	0.57				0.40				0.34				2.49				0.48
31																	

Form (Wet A) No.2 **Results of wet deposition analysis (Cation)**

Site name : Chainart agrometeorological station, Chainart

Funnel diameter : 288 (mm)

Name of Laboratory : King Mongkut's University of Technology Thonburi

Sample No.	Sampling period				NH_4^+	flg1	flg2	flg3	Na^+	flg1	flg2	flg3	K^+	flg1	flg2	flg3	Ca^{2+}	flg1	flg2	flg3	Mg^{2+}	flg1	flg2	flg3		flg1	flg2	flg3
	Start		End																									
	Date	Time	Date	Time	umol/l				umol/l				umol/l				umol/l				umol/l							
1	8/1/2012	9:00	8/2/2012	9:00																								
2	8/2/2012	9:00	8/3/2012	9:00																								
3	8/3/2012	9:00	8/4/2012	9:00	8.70				22.29				10.41				50.34				13.11							
4	8/4/2012	9:00	8/5/2012	9:00																								
5	8/5/2012	9:00	8/6/2012	9:00																								
6	8/6/2012	9:00	8/7/2012	9:00																								
7	8/7/2012	9:00	8/8/2012	9:00																								
8	8/8/2012	9:00	8/9/2012	9:00																								
9	8/9/2012	9:00	8/10/2012	9:00	6.61				5.31				7.70				36.62				7.62							
10	8/10/2012	9:00	8/11/2012	9:00																								
11	8/11/2012	9:00	8/12/2012	9:00																								
12	8/12/2012	9:00	8/13/2012	9:00																								
13	8/13/2012	9:00	8/14/2012	9:00	5.29				4.64				20.08				29.13				4.25							
14	8/14/2012	9:00	8/15/2012	9:00	6.60				1.23				3.41				38.94				6.36							
15	8/15/2012	9:00	8/16/2012	9:00																								
16	8/16/2012	9:00	8/17/2012	9:00																								
17	8/17/2012	9:00	8/18/2012	9:00																								
18	8/18/2012	9:00	8/19/2012	9:00	4.88				4.71				6.36				43.40				4.06							
19	8/19/2012	9:00	8/20/2012	9:00	4.70				3.27				14.17				21.93				4.27							
20	8/20/2012	9:00	8/21/2012	9:00	4.61				1.77				5.84				13.49				4.61							
21	8/21/2012	9:00	8/22/2012	9:00																								
22	8/22/2012	9:00	8/23/2012	9:00																								
23	8/23/2012	9:00	8/24/2012	9:00																								
24	8/24/2012	9:00	8/25/2012	9:00																								

Form (Wet A) No.2 **Results of wet deposition analysis (Cation)**

Site name : Chainart agrometeorological station, Chainart

Funnel diameter : 288 (mm)

Name of Laboratory : King Mongkut's University of Technology Thonburi

Sample No.	Sampling period				NH_4^+	flg1	flg2	flg3	Na^+	flg1	flg2	flg3	K^+	flg1	flg2	flg3	Ca^{2+}	flg1	flg2	flg3	Mg^{2+}	flg1	flg2	flg3		flg1	flg2	flg3
	Start		End																								
	Date	Time	Date	Time	umol/l				umol/l				umol/l				umol/l				umol/l							
25	8/25/2012	9:00	8/26/2012	9:00	5.46				4.45				35.01				5.99				3.38							
26	8/26/2012	9:00	8/27/2012	9:00	1.96				2.21				4.68				8.92				3.09							
27	8/27/2012	9:00	8/28/2012	9:00																								
28	8/28/2012	9:00	8/29/2012	9:00	15.08				3.17				78.01				26.98				6.03							
29	8/29/2012	9:00	8/30/2012	9:00																								
30	8/30/2012	9:00	8/31/2012	9:00	11.19				4.41				18.19				44.06				3.71							
31	8/31/2012	9:00	9/1/2012	9:00																								

Form (Wet A) No.3 Results of wet deposition analysis(EC, pH, R1 ,R2, Precipitation)

Site name : Chainart agrometeorological station, Chainart

Funnel diameter : 288 (mm)

Name of Laboratory : King Mongkut's University of Technology Thonburi

Method Code 1: Rain Gauge 2: Calculation by sample amount 3: others

Sample No.	Sampling period				EC	flg1	flg2	flg3	pH	flg1	flg2	flg3	R1	flg1	flg2	flg3	R2	flg1	flg2	flg3	Amount of sample	flg1	flg2	flg3	Amount of precipitation	Method Code	flg1	flg2	flg3
	Start		End																										
	Date	Time	Date	Time	mS/m																g				mm				
1	8/1/2012	9:00	8/2/2012	9:00																									
2	8/2/2012	9:00	8/3/2012	9:00																									
3	8/3/2012	9:00	8/4/2012	9:00	1.95				6.40					*478*			11.83				125.00				1.30				
4	8/4/2012	9:00	8/5/2012	9:00																									
5	8/5/2012	9:00	8/6/2012	9:00																									
6	8/6/2012	9:00	8/7/2012	9:00																									
7	8/7/2012	9:00	8/8/2012	9:00																									
8	8/8/2012	9:00	8/9/2012	9:00																									
9	8/9/2012	9:00	8/10/2012	9:00	1.44				7.02				4.88				0.66				249.00				3.80				
10	8/10/2012	9:00	8/11/2012	9:00																									
11	8/11/2012	9:00	8/12/2012	9:00																									
12	8/12/2012	9:00	8/13/2012	9:00																									
13	8/13/2012	9:00	8/14/2012	9:00	1.64				6.78				3.08				-11.10				140.00				2.20				
14	8/14/2012	9:00	8/15/2012	9:00	1.17				7.11				1.06				9.97				249.00				3.80				
15	8/15/2012	9:00	8/16/2012	9:00																									
16	8/16/2012	9:00	8/17/2012	9:00																									
17	8/17/2012	9:00	8/18/2012	9:00																									
18	8/18/2012	9:00	8/19/2012	9:00	1.14				6.94				3.13				13.04	*478*			488.00				6.20				
19	8/19/2012	9:00	8/20/2012	9:00	0.84				6.73				-5.44				12.29				1536.00				26.20				
20	8/20/2012	9:00	8/21/2012	9:00	0.51				6.34				5.62				8.65				902.00				10.90				
21	8/21/2012	9:00	8/22/2012	9:00																									
22	8/22/2012	9:00	8/23/2012	9:00																									
23	8/23/2012	9:00	8/24/2012	9:00																									
24	8/24/2012	9:00	8/25/2012	9:00																									

Form (Wet A) No.3 **Results of wet deposition analysis(EC, pH, R1 ,R2, Precipitation)**

Site name : Chainart agrometeorological station, Chainart

Funnel diameter : 288 (mm)

Name of Laboratory : King Mongkut's University of Technology Thonburi

Method Code 1: Rain Gauge 2: Calculation by sample amount 3: others

Sample No.	Sampling period				EC	flg1	flg2	flg3	pH	flg1	flg2	flg3	R1	flg1	flg2	flg3	R2	flg1	flg2	flg3	Amount of sample	flg1	flg2	flg3	Amount of precipitation	Method Code	flg1	flg2	flg3
	Start		End																										
	Date	Time	Date	Time	mS/m																g				mm				
25	8/25/2012	9:00	8/26/2012	9:00	0.78				6.77				2.46				8.48				436.00				4.80				
26	8/26/2012	9:00	8/27/2012	9:00	0.45				6.35				-1.85				3.02				1140.00				16.70				
27	8/27/2012	9:00	8/28/2012	9:00																									
28	8/28/2012	9:00	8/29/2012	9:00	1.62				7.17				12.92	*478*			13.28	*478*			433.00				4.60				
29	8/29/2012	9:00	8/30/2012	9:00																									
30	8/30/2012	9:00	8/31/2012	9:00	1.31				7.09				11.09	*478*			11.96				226.00				3.00				
31	8/31/2012	9:00	9/1/2012	9:00																									

Summary I

Site name : Chainart agrometeorological station, Chainart

Total	--	--	--	--	--	--							--	--
Mean	5.25	5.04	6.61	7.36	0.54	5.87	0.40	1.53	0.68	3.59	2.34	0.00	5.25	3.40
Max.	15.38	14.04	24.97	93.93	8.62	9.42	0.74	3.15	1.41	7.68	21.46	0.00	15.08	22.29
Min.	2.43	2.36	3.42	1.98	0.15	1.80	0.15	0.16	0.15	0.98	0.48	0.00	1.96	1.23

Sample No.	SO_4^{2-} umol/l	nss-SO_4^{2-} umol/l	NO_3^- umol/l	Cl^- umol/l	$HCOO^-$ umol/l	CH_3COO^- umol/l	$C_3H_5O(COO)_3^{3-}$ umol/l	$C_4H_4O_6^{2-}$ umol/l	$C_4H_4O_5^{2-}$ umol/l	$C_4H_4O_4^{2-}$ umol/l	$C_3H_5O_3^-$ umol/l	PO_4^{3-} umol/l	NH_4^+ umol/l	Na^+ umol/l
1														
2														
3	15.38	14.04	24.97	93.93	8.62	2.71	0.23	0.26	0.25	7.68	21.46	0.00	8.70	22.29
4														
5														
6														
7														
8														
9	4.67	4.35	8.38	13.73	0.16	2.67	0.25	0.29	0.32	2.89	1.00	0.00	6.61	5.31
10														
11														
12														
13	9.79	9.51	8.66	17.72	0.31	3.69	0.18	0.63	0.27	1.14	4.35	0.00	5.29	4.64
14	2.43	2.36	3.42	3.98	0.59	3.85	0.70	2.82	0.63	1.94	0.80	0.00	6.60	1.23
15														
16														
17														
18	7.65	7.37	9.39	12.93	0.42	8.54	0.71	1.46	0.73	1.76	1.18	0.00	4.88	4.71
19	6.64	6.44	5.95	6.05	0.69	8.71	0.27	3.15	0.84	6.03	4.08	0.00	4.70	3.27
20	2.75	2.64	5.25	3.67	0.38	9.42	0.15	0.16	1.41	2.48	1.25	0.00	4.61	1.77
21														
22														
23														
24														

Summary 1

Site name : Chainart agrometeorological station, Chainart

Total	--	--	--	--	--	--							--	--
Mean	5.25	5.04	6.61	7.36	0.54	5.87	0.40	1.53	0.68	3.59	2.34	0.00	5.25	3.40
Max.	15.38	14.04	24.97	93.93	8.62	9.42	0.74	3.15	1.41	7.68	21.46	0.00	15.08	22.29
Min.	2.43	2.36	3.42	1.98	0.15	1.80	0.15	0.16	0.15	0.98	0.48	0.00	1.96	1.23

Sample No.	SO_4^{2-}	nss-SO_4^{2-}	NO_3^-	Cl^-	$HCOO^-$	CH_3COO^-	$C_3H_5O(COO)_3^{3-}$	$C_4H_4O_6^{2-}$	$C_4H_4O_5^{2-}$	$C_4H_4O_4^{2-}$	$C_3H_5O_3^-$	PO_4^{3-}	NH_4^+	Na^+
	umol/l	umol/l	umol/l	umol/l	umol/l	umol/l	umol/l	umol/l	umol/l	umol/l	umol/l	umol/l	umol/l	umol/l
25	4.20	3.93	8.55	3.79	0.34	1.80	0.64	0.74	0.15	0.98	0.60	0.00	5.46	4.45
26	3.44	3.31	3.47	1.98	0.17	2.00	0.49	0.79	0.43	2.98	0.78	0.00	1.96	2.21
27														
28	5.69	5.50	13.42	7.04	0.20	3.51	0.74	0.65	0.28	2.32	1.32	0.00	15.08	3.17
29														
30	4.78	4.52	7.74	8.01	0.15	3.80	0.57	0.40	0.34	2.49	0.48	0.00	11.19	4.41
31														

Summary 1 (Cont.)

Site name : Chainart agrometeorological station, Chainart

Total	--	--	--	--	--	--	--
Mean	14.78	22.05	21.98	4.47	0.25	6.60	0.88
Max.	78.01	50.34	49.86	13.11	0.46	7.17	1.95
Min.	3.41	5.99	5.89	3.09	0.07	6.34	0.45

Sample No.	K^+ umol/l	Ca^{2+} umol/l	nss-Ca^{2+} umol/l	Mg^{2+} umol/l	H^+ umol/l	pH	EC mS/m
1							
2							
3	10.41	50.34	49.86	13.11	0.40	6.40	1.95
4							
5							
6							
7							
8							
9	7.70	36.62	36.51	7.62	0.10	7.02	1.44
10							
11							
12							
13	20.08	29.13	29.03	4.25	0.17	6.78	1.64
14	3.41	38.94	38.91	6.36	0.08	7.11	1.17
15							
16							
17							
18	6.36	43.40	43.29	4.06	0.11	6.94	1.14
19	14.17	21.93	21.86	4.27	0.19	6.73	0.84
20	5.84	13.49	13.45	4.61	0.46	6.34	0.51
21							
22							
23							
24							

Summary 1 (Cont.)

Site name : Chainart agrometeorological station, Chainart

Total	--	--	--	--	--	--	--
Mean	14.78	22.05	21.98	4.47	0.25	6.60	0.88
Max.	78.01	50.34	49.86	13.11	0.46	7.17	1.95
Min.	3.41	5.99	5.89	3.09	0.07	6.34	0.45

Sample No.	K^+ umol/l	Ca^{2+} umol/l	nss-Ca^{2+} umol/l	Mg^{2+} umol/l	H^+ umol/l	pH	EC mS/m
25	35.01	5.99	5.89	3.38	0.17	6.77	0.78
26	4.68	8.92	8.87	3.09	0.45	6.35	0.45
27							
28	78.01	26.98	26.91	6.03	0.07	7.17	1.62
29							
30	18.19	44.06	43.97	3.71	0.08	7.09	1.31
31							

Summary 2

Site name : Chainart agrometeorological station, Chainart

Total	438.05	551.68	614.64	45.43	489.82	33.66	127.85	56.73	299.44	195.53	0.00	2852.84	438.53	284.21	1234.05
Mean	--	--	--	--	--						--	--	--	--	--
Max.	173.93	155.95	158.46	18.17	228.13	8.16	82.61	21.98	158.10	106.89	0.00	1111.23	123.01	85.59	371.29
Min.	9.25	12.99	15.12	0.44	3.53	0.30	0.34	0.32	2.51	1.44	0.00	80.40	11.31	4.68	12.96

Sample No.	SO_4^{2-} umol/m^2	NO_3^- umol/m^2	Cl^- umol/m^2	$HCOO^-$ umol/m^2	CH_3COO^- umol/m^2	$C_3H_5O(COO)_3^{3-}$ umol/m^2	$C_4H_4O_6^{2-}$ umol/m^2	$C_4H_4O_5^{2-}$ umol/m^2	$C_4H_4O_4^{2-}$ umol/m^2	$C_3H_5O_3^-$ umol/m^2	PO_4^{3-} umol/m^2	Anion umol/m^2	NH_4^+ umol/m^2	Na^+ umol/m^2	K^+ umol/m^2
1															
2															
3	20.00	32.47	122.11	11.21	3.53	0.30	0.34	0.32	9.99	27.89	0.00	228.15	11.31	28.97	13.53
4															
5															
6															
7															
8															
9	17.75	31.85	52.19	0.62	10.14	0.96	1.10	1.21	10.98	3.79	0.00	130.58	25.13	20.18	29.27
10															
11															
12															
13	21.55	19.04	38.99	0.67	8.12	0.39	1.38	0.59	2.51	9.58	0.00	102.82	11.65	10.21	44.18
14	9.25	12.99	15.12	2.23	14.65	2.65	10.71	2.39	7.36	3.05	0.00	80.40	25.07	4.68	12.96
15															
16															
17															
18	47.44	58.22	80.14	2.59	52.97	4.38	9.04	4.51	10.90	7.34	0.00	277.52	30.24	29.21	39.45
19	173.93	155.95	158.46	18.17	228.13	7.01	82.61	21.98	158.10	106.89	0.00	1111.23	123.01	85.59	371.29
20	29.99	57.23	39.97	4.19	102.73	1.64	1.80	15.42	26.99	13.57	0.00	293.53	50.21	19.34	63.70
21															
22															
23															
24															
25	20.17	41.05	18.17	1.61	8.62	3.07	3.54	0.72	4.70	2.89	0.00	104.55	26.21	21.38	168.05

Summary 2

Site name : Chainart agrometeorological station, Chainart

Total	438.05	551.68	614.64	45.43	489.82	33.66	127.85	56.73	299.44	195.53	0.00	2852.84	438.53	284.21	1234.05
Mean	--	--	--	--	--						--	--	--	--	--
Max.	173.93	155.95	158.46	18.17	228.13	8.16	82.61	21.98	158.10	106.89	0.00	1111.23	123.01	85.59	371.29
Min.	9.25	12.99	15.12	0.44	3.53	0.30	0.34	0.32	2.51	1.44	0.00	80.40	11.31	4.68	12.96

Sample No.	SO_4^{2-} umol/m^2	NO_3^- umol/m^2	Cl^- umol/m^2	$HCOO^-$ umol/m^2	CH_3COO^- umol/m^2	$C_3H_5O(COO)_3^{3-}$ umol/m^2	$C_4H_4O_6^{2-}$ umol/m^2	$C_4H_4O_5^{2-}$ umol/m^2	$C_4H_4O_4^{2-}$ umol/m^2	$C_3H_5O_3^-$ umol/m^2	PO_4^{3-} umol/m^2	Anion umol/m^2	NH_4^+ umol/m^2	Na^+ umol/m^2	K^+ umol/m^2
26	57.46	57.93	33.07	2.78	33.40	8.16	13.14	7.26	49.75	12.99	0.00	275.94	32.77	36.83	78.20
27															
28	26.16	61.73	32.38	0.92	16.14	3.40	2.98	1.30	10.69	6.08	0.00	161.79	69.36	14.59	358.84
29															
30	14.35	23.23	24.04	0.44	11.40	1.71	1.20	1.03	7.47	1.44	0.00	86.32	33.58	13.23	54.58
31															

Summary 2 (Cont.)

Site name : Chainart agrometeorological station, Chainart

Total	1841.23	373.56	20.94	4397.52	7250.36	420.92	1835.08	73.28
Mean	--	--	--	--	--	--	--	--
Max.	574.47	111.98	7.46	1290.21	2401.44	168.77	572.62	21.96
Min.	28.75	9.35	0.24	139.83	255.66	8.97	28.29	2.53

Sample No.	Ca^{2+} $umol/m^2$	Mg^{2+} $umol/m^2$	H^+ $umol/m^2$	Cation $umol/m^2$	C+A $umol/m^2$	nss-SO_4^{2-} $umol/m^2$	nss-Ca^{2+} $umol/m^2$	EC x ppt. mS/m*mm
1								
2								
3	65.45	17.05	0.52	139.83	367.98	18.25	64.82	2.53
4								
5								
6								
7								
8								
9	139.16	28.95	0.36	252.06	382.64	16.53	138.73	5.46
10								
11								
12								
13	64.08	9.35	0.37	152.83	255.66	20.93	63.86	3.61
14	147.97	24.17	0.29	229.14	309.54	8.97	147.87	4.46
15								
16								
17								
18	269.05	25.20	0.71	411.87	689.39	45.68	268.42	7.07
19	574.47	111.98	4.88	1290.21	2401.44	168.77	572.62	21.96
20	147.05	50.22	4.98	355.50	649.03	28.82	146.63	5.60
21								
22								
23								
24								

Summary 2 (Cont.)

Site name : Chainart agrometeorological station, Chainart

Total	1841.23	373.56	20.94	4397.52	7250.36	420.92	1835.08	73.28
Mean	--	--	--	--	--	--	--	--
Max.	574.47	111.98	7.46	1290.21	2401.44	168.77	572.62	21.96
Min.	28.75	9.35	0.24	139.83	255.66	8.97	28.29	2.53

Sample No.	Ca^{2+} umol/m^2	Mg^{2+} umol/m^2	H^+ umol/m^2	Cation umol/m^2	C+A umol/m^2	nss-SO_4^{2-} umol/m^2	nss-Ca^{2+} umol/m^2	EC x ppt. mS/m*mm
25	28.75	16.23	0.82	286.44	390.99	18.88	28.29	3.73
26	148.96	51.52	7.46	381.74	657.69	55.24	148.16	7.46
27								
28	124.09	27.76	0.31	622.94	784.73	25.28	123.77	7.47
29								
30	132.19	11.14	0.24	274.96	361.29	13.56	131.91	3.92
31								

Summary 3

Site name : Chainart agrometeorological station, Chainart

Total	--	--	--	--	--	--	--						--	--	--	--	--	--	--
Mean	10.49	6.61	7.36	0.54	5.87	0.00	--	1.21	3.06	1.36	3.59	2.34	--	5.25	3.40	14.78	44.10	8.95	0.25
Max.	30.76	24.97	93.93	8.62	9.42	0.00	--	2.22	6.31	2.83	7.68	21.46	205.76	15.08	22.29	78.01	100.69	26.23	0.46
Min.	4.87	3.42	1.98	0.15	1.80	0.00	--	0.45	0.33	0.30	0.98	0.48	34.56	1.96	1.23	3.41	11.98	6.17	0.07

Sample No.	SO_4^{2-} ueq/l	NO_3^- ueq/l	Cl^- ueq/l	$HCOO^-$ ueq/l	CH_3COO^- ueq/l	PO_4^{3-} ueq/l	HCO_3^- ueq/l	$C_3H_5O(COO)_3^{3-}$ ueq/l	$C_4H_4O_6^{2-}$ ueq/l	$C_4H_4O_5^{2-}$ ueq/l	$C_4H_4O_4^{2-}$ ueq/l	$C_3H_5O_3^-$ ueq/l	Anion ueq/l	NH_4^+ ueq/l	Na^+ ueq/l	K^+ ueq/l	Ca^{2+} ueq/l	Mg^{2+} ueq/l	H^+ ueq/l
1																			
2																			
3	30.76	24.97	93.93	8.62	2.71	0.00	13.91	0.68	0.53	0.49	7.68	21.46	205.76	8.70	22.29	10.41	100.69	26.23	0.40
4																			
5																			
6																			
7																			
8																			
9	9.34	8.38	13.73	0.16	2.67	0.00	58.00	0.76	0.58	0.63	2.89	1.00	98.14	6.61	5.31	7.70	73.24	15.24	0.10
10																			
11																			
12																			
13	19.59	8.66	17.72	0.31	3.69	0.00	33.38	0.53	1.25	0.54	1.14	4.35	91.15	5.29	4.64	20.08	58.26	8.50	0.17
14	4.87	3.42	3.98	0.59	3.85	0.00	71.35	2.09	5.64	1.26	1.94	0.80	99.79	6.60	1.23	3.41	77.88	12.72	0.08
15																			
16																			
17																			
18	15.30	9.39	12.93	0.42	8.54	0.00	48.24	2.12	2.92	1.46	1.76	1.18	104.25	4.88	4.71	6.36	86.79	8.13	0.11
19	13.28	5.95	6.05	0.69	8.71	0.00	29.75	0.80	6.31	1.68	6.03	4.08	83.32	4.70	3.27	14.17	43.85	8.55	0.19
20	5.50	5.25	3.67	0.38	9.42	0.00	12.12	0.45	0.33	2.83	2.48	1.25	43.68	4.61	1.77	5.84	26.98	9.21	0.46
21																			
22																			
23																			
24																			

Summary 3

Site name : Chainart agrometeorological station, Chainart

Total	--	--	--	--	--	--	--						--	--	--	--	--	--	--
Mean	10.49	6.61	7.36	0.54	5.87	0.00	--	1.21	3.06	1.36	3.59	2.34	--	5.25	3.40	14.78	44.10	8.95	0.25
Max.	30.76	24.97	93.93	8.62	9.42	0.00	--	2.22	6.31	2.83	7.68	21.46	205.76	15.08	22.29	78.01	100.69	26.23	0.46
Min.	4.87	3.42	1.98	0.15	1.80	0.00	--	0.45	0.33	0.30	0.98	0.48	34.56	1.96	1.23	3.41	11.98	6.17	0.07

Sample No.	SO_4^{2-}	NO_3^-	Cl^-	$HCOO^-$	CH_3COO^-	PO_4^{3-}	HCO_3^-	$C_3H_5O(COO)_3^{3-}$	$C_4H_4O_6^{2-}$	$C_4H_4O_5^{2-}$	$C_4H_4O_4^{2-}$	$C_3H_5O_3^-$	Anion	NH_4^+	Na^+	K^+	Ca^{2+}	Mg^{2+}	H^+
	ueq/l	ueq/l	ueq/l	ueq/l	ueq/l	ueq/l	ueq/l	ueq/l	ueq/l	ueq/l	ueq/l	ueq/l	ueq/l	ueq/l	ueq/l	ueq/l	ueq/l	ueq/l	ueq/l
25	8.41	8.55	3.79	0.34	1.80	0.00	32.62	1.92	1.48	0.30	0.98	0.60	60.77	5.46	4.45	35.01	11.98	6.76	0.17
26	6.88	3.47	1.98	0.17	2.00	0.00	12.40	1.47	1.57	0.87	2.98	0.78	34.56	1.96	2.21	4.68	17.84	6.17	0.45
27																			
28	11.37	13.42	7.04	0.20	3.51	0.00	81.93	2.22	1.30	0.57	2.32	1.32	125.20	15.08	3.17	78.01	53.95	12.07	0.07
29																			
30	9.57	7.74	8.01	0.15	3.80	0.00	68.14	1.71	0.80	0.69	2.49	0.48	103.59	11.19	4.41	18.19	88.13	7.43	0.08
31																			

Summary 3 (Cont.)

Site name : Chainart agrometeorological station, Chainart

Total	--	--	--	--	--	--	--	--		83.50		11
Mean	--	--	--	--	--	0.88	--	--	--	--	--	--
Max.	168.71	374.48	--	12.92	2.47	1.95	--	13.28		26.20		1
Min.	33.31	-9.89	--	-9.89	0.47	0.45	--	-11.10		1.30	0.00	1

Sample No.	Cation ueq/l	C+A ueq/l	Req.R1	R1	ECcal mS/m	ECmeas mS/m	Req.R2	R2	Amount of ppt.(cal) M mm	Amount of ppt. R mm	% CE (M/R) %	Sampling period day(s)
1												
2												
3	168.71	374.48	8.00	-9.89	2.47	1.95	13.00	11.83		1.30		1
4												
5												
6												
7												
8												
9	108.20	206.35	8.00	4.88	1.46	1.44	13.00	0.66		3.80		1
10												
11												
12												
13	96.94	188.09	8.00	3.08	1.31	1.64	13.00	-11.10		2.20		1
14	101.92	201.70	8.00	1.06	1.43	1.17	13.00	9.97		3.80		1
15												
16												
17												
18	110.99	215.24	8.00	3.13	1.48	1.14	13.00	13.04		6.20		1
19	74.72	158.04	8.00	-5.44	1.07	0.84	13.00	12.29		26.20		1
20	48.88	92.56	15.00	5.62	0.61	0.51	13.00	8.65		10.90		1
21												
22												
23												
24												

Summary 3 (Cont.)

Site name : Chainart agrometeorological station, Chainart

Total	--	--	--	--	--	--	--	--		83.50		11
Mean	--	--	--	--	--	0.88	--	--	--	--	--	--
Max.	168.71	374.48	--	12.92	2.47	1.95	--	13.28		26.20		1
Min.	33.31	-9.89	--	-9.89	0.47	0.45	--	-11.10		1.30	0.00	1

Sample No.	Cation ueq/l	C+A ueq/l	Req.R1	R1	ECcal mS/m	ECmeas mS/m	Req.R2	R2	Amount of ppt.(cal) M mm	Amount of ppt. R mm	% CE (M/R) %	Sampling period day(s)
25	63.84	124.61	8.00	2.46	0.92	0.78	13.00	8.48		4.80		1
26	33.31	67.87	15.00	-1.85	0.47	0.45	20.00	3.02		16.70		1
27												
28	162.35	287.54	8.00	12.92	2.12	1.62	13.00	13.28		4.60		1
29												
30	129.43	233.02	8.00	11.09	1.66	1.31	13.00	11.96		3.00		1
31												

Form (Wet A) No.1 Results of wet deposition analysis (Anion)

Site name : Chainart agrometeorological station, Chainart

Funnel diameter : 288 (mm)

Name of Laboratory : King Mongkut's University of Technology Thonburi

Sample No.	Sampling period				SO_4^{2-}	flg1	flg2	flg3	NO_3^-	flg1	flg2	flg3	Cl^-	flg1	flg2	flg3	$HCOO^-$	flg1	flg2	flg3	CH_3COO^-	flg1	flg2	flg3	PO_4^{3-}	flg1	flg2	flg3
	Start		End																									
	Date	Time	Date	Time	umol/l				umol/l				umol/l				umol/l				umol/l				umol/l			
1	01/09/2012	9:00	02/09/2012	9:00																								
2	02/09/2012	9:00	03/09/2012	9:00	9.81				9.16				7.88				0.66				2.28				0			
3	03/09/2012	9:00	04/09/2012	9:00																								
4	04/09/2012	9:00	05/09/2012	9:00	6.28				14.40				5.49				0.12				2.04				0			
5	05/09/2012	9:00	06/09/2012	9:00	4.71				6.94				1.99				0.06				1.31				0			
6	06/09/2012	9:00	07/09/2012	9:00	4.73				2.93				1.41				0.24				1.73				0			
7	07/09/2012	9:00	08/09/2012	9:00	6.19				7.84				4.05				0.18				1.58				0			
8	08/09/2012	9:00	09/09/2012	9:00																								
9	09/09/2012	9:00	10/09/2012	9:00	3.49				6.02				2.27				0.12				1.49				0			
10	10/09/2012	9:00	11/09/2012	9:00																								
11	11/09/2012	9:00	12/09/2012	9:00																								
12	12/09/2012	9:00	13/09/2012	9:00	5.72				5.13				12.31				0.53				7.15				0			
13	13/09/2012	9:00	14/09/2012	9:00	35.01				20.11				11.52				0.80				7.40				0			
14	14/09/2012	9:00	15/09/2012	9:00	9.43				15.69				3.83				0.58				5.97				0			
15	15/09/2012	9:00	16/09/2012	9:00																								
16	16/09/2012	9:00	17/09/2012	9:00	9.84				11.63				10.11				0.80				8.35				0			
17	17/09/2012	9:00	18/09/2012	9:00																								
18	18/09/2012	9:00	19/09/2012	9:00																								
19	19/09/2012	9:00	20/09/2012	9:00	7.34				12.98				3.35				0.34				3.67				0			
20	20/09/2012	9:00	21/09/2012	9:00	3.80				3.68				0.77				0.22				4.90				0			
21	21/09/2012	9:00	22/09/2012	9:00																								
22	22/09/2012	9:00	23/09/2012	9:00																								
23	23/09/2012	9:00	24/09/2012	9:00																								
24	24/09/2012	9:00	25/09/2012	9:00																								

Form (Wet A) No.1 Results of wet deposition analysis (Anion)

Site name : Chainart agrometeorological station, Chainart

Funnel diameter : 288 (mm)

Name of Laboratory : King Mongkut's University of Technology Thonburi

Sample No.	Sampling period				SO_4^{2-}	flg1	flg2	flg3	NO_3^-	flg1	flg2	flg3	Cl^-	flg1	flg2	flg3	$HCOO^-$	flg1	flg2	flg3	CH_3COO^-	flg1	flg2	flg3	PO_4^{3-}	flg1	flg2	flg3
	Start		End																									
	Date	Time	Date	Time	umol/l				umol/l				umol/l				umol/l				umol/l				umol/l			
25	25/09/2012	9:00	26/09/2012	9:00																								
26	26/09/2012	9:00	27/09/2012	9:00	8.89				12.79				8.35				0.37				5.37				0			
27	27/09/2012	9:00	28/09/2012	9:00	3.82				3.33				1.71				0.40				2.62				0			
28	28/09/2012	9:00	29/09/2012	9:00	6.30				5.95				2.17				0.50				4.87				0			
29	29/09/2012	9:00	30/09/2012	9:00																								
30	30/09/2012	9:00	01/10/2012	9:00																								

Form (Wet A) No.1 (Cont.) **Results of wet deposition analysis (Anion)**

Sample No.	$C_3H_5O(COO)_3^{3-}$ umol/l	flg1	flg2	flg3	$C_4H_4O_6^{2-}$ umol/l	flg1	flg2	flg3	$C_4H_4O_5^{2-}$ umol/l	flg1	flg2	flg3	$C_4H_4O_4^{2-}$ umol/l	flg1	flg2	flg3	$C_3H_5O_3^-$ umol/l
1																	
2	0.08				0.70				1.59				2.61				2.92
3																	
4	0.11				0.09				0.07				0.15				0.12
5	0.24				0.01				0.03				0.14				0.27
6	0.08				0.07				0.07				0.27				0.20
7	0.07				0.05				0.05				0.95				0.07
8																	
9	0.08				0.01				0.05				0.14				0.07
10																	
11																	
12	0.62				0.56				0.63				0.57				3.45
13	0.50				0.40				0.34				8.44				5.30
14	0.61				0.95				0.75				3.15				2.66
15																	
16	0.40				0.33				0.43				0.54				1.06
17																	
18																	
19	0.16				0.10				0.15				2.32				1.73
20	0.16				0.11				0.47				1.26				1.40
21																	
22																	
23																	
24																	

Sample No.	$C_3H_5O(COO)_3^{3-}$ umol/l	flg1	flg2	flg3	$C_4H_4O_6^{2-}$ umol/l	flg1	flg2	flg3	$C_4H_4O_5^{2-}$ umol/l	flg1	flg2	flg3	$C_4H_4O_4^{2-}$ umol/l	flg1	flg2	flg3	$C_3H_5O_3^{-}$ umol/l
25																	
26	0.28				0.24				0.15				0.43				6.18
27	0.05				0.33				0.45				1.94				0.70
28	0.24				1.14				0.24				3.15				2.34
29																	
30																	

Form (Wet A) No.2 Results of wet deposition analysis (Cation)

Site name : Chainart agrometeorological station, Chainart

Funnel diameter : 288 (mm)

Name of Laboratory : King Mongkut's University of Technology Thonburi

Sample No.	Sampling period				NH_4^+	flg1	flg2	flg3	Na^+	flg1	flg2	flg3	K^+	flg1	flg2	flg3	Ca^{2+}	flg1	flg2	flg3	Mg^{2+}	flg1	flg2	flg3		flg1	flg2	flg3
	Start		End																									
	Date	Time	Date	Time	umol/l				umol/l				umol/l				umol/l				umol/l							
1																												
2					4.79				10.15				60.29				41.52				4.73							
3																												
4					17.88				5.16				19.56				24.38				6.71							
5					5.89				3.58				12.38				18.76				3.92							
6					3.73				3.87				11.81				16.97				5.25							
7					6.51				3.34				8.40				14.16				2.34							
8					0.00																							
9					9.17				3.71				11.48				15.85				3.12							
10																												
11																												
12					4.75				5.25				16.75				27.36				5.06							
13					9.54				24.68				11.81				47.34				9.91							
14					5.81				6.51				9.89				24.68				4.47							
15																												
16					6.80				14.29				19.77				16.66				3.98							
17					0.00																							
18					0.00																							
19					6.17				8.60				7.87				13.34				3.32							
20					7.32				4.46				8.65				11.08				2.97							
21																												
22																												
23																												
24																												

Form (Wet A) No.2 Results of wet deposition analysis (Cation)

Site name : Chainart agrometeorological station, Chainart

Funnel diameter : 288 (mm)

Name of Laboratory : King Mongkut's University of Technology Thonburi

Sample No.	Sampling period				NH_4^+	flg1	flg2	flg3	Na^+	flg1	flg2	flg3	K^+	flg1	flg2	flg3	Ca^{2+}	flg1	flg2	flg3	Mg^{2+}	flg1	flg2	flg3		flg1	flg2	flg3
	Start		End																									
	Date	Time	Date	Time	umol/l				umol/l				umol/l				umol/l				umol/l							
25																												
26					13.09				11.70				7.94				14.69				5.25							
27					12.90				6.83				5.04				10.82				5.61							
28					11.27				8.21				5.49				16.00				6.69							
29																												
30																												

Form (Wet A) No.3 Results of wet deposition analysis(EC, pH, R1 ,R2, Precipitation)

Site name : Chainart agrometeorological station, Chainart

Funnel diameter : 288 (mm)

Name of Laboratory : King Mongkut's University of Technology Thonburi

Method Code 1: Rain Gauge 2: Calculation by sample amount 3: others

Sample No.	Sampling period				EC	flg1	flg2	flg3	pH	flg1	flg2	flg3	R1	flg1	flg2	flg3	R2	flg1	flg2	flg3	Amount of sample	flg1	flg2	flg3	Amount of precipitation	Method Code	flg1	flg2	flg3
	Start		End																										
	Date	Time	Date	Time	mS/m																g				mm				
1																													
2					1.95				7.28												121.00				1.20				
3																													
4					1.25				7.07												220.00				2.50				
5					0.77				6.84												2136.00				27.60				
6					0.67				6.85												4219.00				76.00				
7					0.52				6.47												2099.00				26.80				
8																													
9					0.67				6.83												2590.00				48.10				
10																													
11																													
12					1.15				6.89												976.00				15.90				
13					1.97				7.13												236.00				2.70				
14					0.85				6.64												565.00				7.80				
15																													
16					1.18				6.90												117.00				0.80				
17																													
18																													
19					0.88				6.38												988.00				13.00				
20					0.44				6.54												2596.00				48.40				
21																													
22																													
23																													
24																													

Form (Wet A) No.3 Results of wet deposition analysis(EC, pH, R1 ,R2, Precipitation)

Site name : Chainart agrometeorological station, Chainart

Funnel diameter : 288 (mm)

Name of Laboratory : King Mongkut's University of Technology Thonburi

Method Code 1: Rain Gauge 2: Calculation by sample amount 3: others

Sample No.	Sampling period				EC	flg1	flg2	flg3	pH	flg1	flg2	flg3	R1	flg1	flg2	flg3	R2	flg1	flg2	flg3	Amount of sample	flg1	flg2	flg3	Amount of precipitation	Method Code	flg1	flg2	flg3
	Start		End																										
	Date	Time	Date	Time	mS/m																g				mm				
25																													
26					0.79				6.17												247.00				3.20				
27					0.60				6.79												3128.00				57.70				
28					0.69				6.67												1952.00				32.20				
29																													
30																													

Summary 1

Site name : Chainart agrometeorological station, Chainart

Total														
Mean	5.08	4.76	5.50	2.59	0.28	2.98	0.16	0.25	0.24	1.16	0.96	0.00	7.83	5.28
Max.	35.01	33.52	20.11	12.31	0.80	8.35	0.62	1.14	1.59	8.44	6.18	0.00	17.88	24.68
Min.	3.49	3.27	2.93	0.77	0.06	1.31	0.05	0.01	0.03	0.14	0.07	0.00	0.00	3.34

Sample No.	SO_4^{2-} umol/l	nss-SO_4^{2-} umol/l	NO_3^- umol/l	Cl^- umol/l	$HCOO^-$ umol/l	CH_3COO^- umol/l	$C_3H_5O(COO)_3^{3-}$ umol/l	$C_4H_4O_6^{2-}$ umol/l	$C_4H_4O_5^{2-}$ umol/l	$C_4H_4O_4^{2-}$ umol/l	$C_3H_5O_3^-$ umol/l	PO_4^{3-} umol/l	NH_4^+ umol/l	Na^+ umol/l
1														
2	9.81	9.20	9.16	7.88	0.66	2.28	0.08	0.70	1.59	2.61	2.92	0.00	4.79	10.15
3														
4	6.28	5.97	14.40	5.49	0.12	2.04	0.11	0.09	0.07	0.15	0.12	0.00	17.88	5.16
5	4.71	4.50	6.94	1.99	0.06	1.31	0.24	0.01	0.03	0.14	0.27	0.00	5.89	3.58
6	4.73	4.49	2.93	1.41	0.24	1.73	0.08	0.07	0.07	0.27	0.20	0.00	3.73	3.87
7	6.19	5.99	7.84	4.05	0.18	1.58	0.07	0.05	0.05	0.95	0.07	0.00	6.51	3.34
8													0.00	
9	3.49	3.27	6.02	2.27	0.12	1.49	0.08	0.01	0.05	0.14	0.07	0.00	9.17	3.71
10														
11														
12	5.72	5.40	5.13	12.31	0.53	7.15	0.62	0.56	0.63	0.57	3.45	0.00	4.75	5.25
13	35.01	33.52	20.11	11.52	0.80	7.40	0.50	0.40	0.34	8.44	5.30	0.00	9.54	24.68
14	9.43	9.04	15.69	3.83	0.58	5.97	0.61	0.95	0.75	3.15	2.66	0.00	5.81	6.51
15														
16	9.84	8.98	11.63	10.11	0.80	8.35	0.40	0.33	0.43	0.54	1.06	0.00	6.80	14.29
17													0.00	
18													0.00	
19	7.34	6.82	12.98	3.35	0.34	3.67	0.16	0.10	0.15	2.32	1.73	0.00	6.17	8.60
20	3.80	3.54	3.68	0.77	0.22	4.90	0.16	0.11	0.47	1.26	1.40	0.00	7.32	4.46
21														
22														
23														
24														

Summary 1

Site name : Chainart agrometeorological station, Chainart

Total														
Mean	5.08	4.76	5.50	2.59	0.28	2.98	0.16	0.25	0.24	1.16	0.96	0.00	7.83	5.28
Max.	35.01	33.52	20.11	12.31	0.80	8.35	0.62	1.14	1.59	8.44	6.18	0.00	17.88	24.68
Min.	3.49	3.27	2.93	0.77	0.06	1.31	0.05	0.01	0.03	0.14	0.07	0.00	0.00	3.34

Sample No.	SO_4^{2-} umol/l	nss-SO_4^{2-} umol/l	NO_3^- umol/l	Cl^- umol/l	$HCOO^-$ umol/l	CH_3COO^- umol/l	$C_3H_5O(COO)_3^{3-}$ umol/l	$C_4H_4O_6^{2-}$ umol/l	$C_4H_4O_5^{2-}$ umol/l	$C_4H_4O_4^{2-}$ umol/l	$C_3H_5O_3^-$ umol/l	PO_4^{3-} umol/l	NH_4^+ umol/l	Na^+ umol/l
25														
26	8.89	8.18	12.79	8.35	0.37	5.37	0.28	0.24	0.15	0.43	6.18	0.00	13.09	11.70
27	3.82	3.41	3.33	1.71	0.40	2.62	0.05	0.33	0.45	1.94	0.70	0.00	12.90	6.83
28	6.30	5.80	5.95	2.17	0.50	4.87	0.24	1.14	0.24	3.15	2.34	0.00	11.27	8.21
29														
30														

Summary 1 (Cont.)

Site name : Chainart agrometeorological station, Chainart

Total							
Mean	9.74	15.73	15.62	4.48	0.20	6.70	0.68
Max.	60.29	47.34	46.81	9.91	0.68	7.28	0.44
Min.	5.04	10.82	10.67	2.34	0.05	6.17	0.44

Sample No.	K^+ umol/l	Ca^{2+} umol/l	nss-Ca^{2+} umol/l	Mg^{2+} umol/l	H^+ umol/l	pH	EC mS/m
1							
2	60.29	41.52	41.30	4.73	0.05	7.28	1.95
3							
4	19.56	24.38	24.27	6.71	0.09	7.07	1.25
5	12.38	18.76	18.69	3.92	0.14	6.84	0.77
6	11.81	16.97	16.89	5.25	0.14	6.85	0.67
7	8.40	14.16	14.09	2.34	0.34	6.47	0.52
8							
9	11.48	15.85	15.77	3.12	0.15	6.83	0.67
10							
11							
12	16.75	27.36	27.24	5.06	0.13	6.89	1.15
13	11.81	47.34	46.81	9.91	0.07	7.13	1.97
14	9.89	24.68	24.54	4.47	0.23	6.64	0.85
15							
16	19.77	16.66	16.35	3.98	0.13	6.90	1.18
17							
18							
19	7.87	13.34	13.16	3.32	0.42	6.38	0.88
20	8.65	11.08	10.98	2.97	0.29	6.54	0.44
21							
22							
23							
24							

Summary 1 (Cont.)

Site name : Chainart agrometeorological station, Chainart

Total							
Mean	9.74	15.73	15.62	4.48	0.20	6.70	0.68
Max.	60.29	47.34	46.81	9.91	0.68	7.28	0.44
Min.	5.04	10.82	10.67	2.34	0.05	6.17	0.44

Sample No.	K^+ umol/l	Ca^{2+} umol/l	nss-Ca^{2+} umol/l	Mg^{2+} umol/l	H^+ umol/l	pH	EC mS/m
25							
26	7.94	14.69	14.44	5.25	0.68	6.17	0.79
27	5.04	10.82	10.67	5.61	0.16	6.79	0.60
28	5.49	16.00	15.82	6.69	0.21	6.67	0.69
29							
30							

Summary 2

Site name : Chainart agrometeorological station, Chainart

Total	1848.85	2000.68	943.36	102.42	1086.09	56.70	89.17	88.24	422.38	348.78	0.00	6986.67	2848.37	1921.76	3542.62
Mean											--	--	--	--	--
Max.	359.19	289.56	195.69	22.82	237.17	9.79	36.60	26.21	111.92	75.23	0.00	891.92	744.60	394.29	897.62
Min.	7.88	9.30	8.09	0.29	2.74	0.10	0.23	0.18	0.37	0.31	0.00	34.80	5.44	11.43	15.82

Sample No.	SO_4^{2-} umol/m^2	NO_3^- umol/m^2	Cl^- umol/m^2	$HCOO^-$ umol/m^2	CH_3COO^- umol/m^2	$C_3H_5O(COO)_3^{3-}$ umol/m^2	$C_4H_4O_6^{2-}$ umol/m^2	$C_4H_4O_5^{2-}$ umol/m^2	$C_4H_4O_4^{2-}$ umol/m^2	$C_3H_5O_3^-$ umol/m^2	PO_4^{3-} umol/m^2	Anion umol/m^2	NH_4^+ umol/m^2	Na^+ umol/m^2	K^+ umol/m^2
1															
2	11.77	11.00	9.46	0.79	2.74	0.10	0.84	1.91	3.14	3.50	0.00	45.23	5.75	12.18	72.35
3															
4	15.70	36.01	13.73	0.29	5.09	0.28	0.23	0.18	0.37	0.31	0.00	72.19	44.71	12.91	48.90
5	130.13	191.66	54.81	1.66	36.15	6.71	0.30	0.94	3.77	7.53	0.00	433.65	162.63	98.92	341.65
6	359.19	222.94	107.41	18.41	131.68	6.23	5.44	5.01	20.25	15.36	0.00	891.92	283.53	293.88	897.62
7	165.81	210.13	108.64	4.82	42.35	1.97	1.21	1.46	25.34	1.81	0.00	563.54	174.41	89.64	225.16
8															
9	167.94	289.56	108.95	5.67	71.46	3.92	0.42	2.40	6.94	3.56	0.00	660.83	441.27	178.47	551.98
10															
11															
12	90.95	81.54	195.69	8.37	113.67	9.79	8.88	9.94	9.02	54.86	0.00	582.71	75.53	83.41	266.31
13	94.52	54.30	31.11	2.15	19.97	1.34	1.07	0.93	22.78	14.31	0.00	242.48	25.76	66.63	31.90
14	73.59	122.36	29.88	4.51	46.55	4.76	7.38	5.88	24.60	20.76	0.00	340.27	45.36	50.76	77.12
15															
16	7.88	9.30	8.09	0.64	6.68	0.32	0.27	0.35	0.43	0.85	0.00	34.80	5.44	11.43	15.82
17															
18															
19	95.41	168.76	43.49	4.39	47.67	2.13	1.26	1.98	30.21	22.46	0.00	417.77	80.21	111.74	102.27
20	184.16	178.11	37.14	10.54	237.17	7.76	5.46	22.72	60.94	67.92	0.00	811.91	354.41	215.79	418.52
21															
22															
23															
24															

Summary 2

Site name : Chainart agrometeorological station, Chainart

Total	1848.85	2000.68	943.36	102.42	1086.09	56.70	89.17	88.24	422.38	348.78	0.00	6986.67	2848.37	1921.76	3542.62
Mean											--	--	--	--	--
Max.	359.19	289.56	195.69	22.82	237.17	9.79	36.60	26.21	111.92	75.23	0.00	891.92	744.60	394.29	897.62
Min.	7.88	9.30	8.09	0.29	2.74	0.10	0.23	0.18	0.37	0.31	0.00	34.80	5.44	11.43	15.82

Sample No.	SO_4^{2-}	NO_3^-	Cl^-	$HCOO^-$	CH_3COO^-	$C_3H_5O(COO)_3^{3-}$	$C_4H_4O_6^{2-}$	$C_4H_4O_5^{2-}$	$C_4H_4O_4^{2-}$	$C_3H_5O_3^-$	PO_4^{3-}	Anion	NH_4^+	Na^+	K^+
	umol/m^2	umol/m^2	umol/m^2	umol/m^2	umol/m^2	umol/m^2	umol/m^2	umol/m^2	umol/m^2	umol/m^2	umol/m^2	umol/m^2	umol/m^2	umol/m^2	umol/m^2
25															
26	28.44	40.92	26.73	1.18	17.19	0.90	0.75	0.49	1.37	19.77	0.00	137.73	41.90	37.43	25.41
27	220.62	192.43	98.47	22.82	151.04	2.87	19.06	26.21	111.92	40.55	0.00	885.99	744.60	394.29	290.71
28	202.73	191.66	69.76	16.17	156.70	7.63	36.60	7.85	101.29	75.23	0.00	865.63	362.87	264.29	176.89
29															
30															

Summary 2 (Cont.)

Site name : Chainart agrometeorological station, Chainart

Total	5725.28	1630.20	73.12	15949.35	22936.02	1733.00	5683.75	246.84
Mean	--	--	--	--	--	--	--	--
Max.	1289.99	399.23	13.96	3180.98	4072.90	341.48	1283.64	50.92
Min.	13.33	3.18	0.06	65.30	100.11	7.19	13.08	0.94

Sample No.	Ca^{2+} $\mu mol/m^2$	Mg^{2+} $\mu mol/m^2$	H^+ $\mu mol/m^2$	Cation $\mu mol/m^2$	C+A $\mu mol/m^2$	nss-SO_4^{2-} $\mu mol/m^2$	nss-Ca^{2+} $\mu mol/m^2$	EC x ppt. mS/m*mm
1								
2	49.82	5.68	0.06	147.84	193.07	11.03	49.56	2.34
3								
4	60.96	16.78	0.21	188.47	260.66	14.93	60.68	3.13
5	517.84	108.20	3.99	1238.23	1671.88	124.16	515.71	21.14
6	1289.99	399.23	10.74	3180.98	4072.90	341.48	1283.64	50.92
7	379.53	62.73	9.08	947.56	1511.09	160.40	377.60	13.96
8								
9	762.30	149.98	7.11	2100.12	2760.95	157.19	758.45	32.37
10								
11								
12	434.99	80.38	2.05	954.68	1537.39	85.93	433.19	18.30
13	127.82	26.77	0.20	292.06	534.55	90.51	126.38	5.31
14	192.51	34.84	1.79	416.37	756.65	70.53	191.41	6.61
15								
16	13.33	3.18	0.10	65.30	100.11	7.19	13.08	0.94
17								
18								
19	173.46	43.21	5.42	535.30	953.07	88.67	171.05	11.48
20	536.29	143.55	13.96	1702.52	2514.43	171.15	531.63	21.15
21								
22								
23								
24								

Summary 2 (Cont.)

Site name : Chainart agrometeorological station, Chainart

Total	5725.28	1630.20	73.12	15949.35	22936.02	1733.00	5683.75	246.84
Mean	--	--	--	--	--	--	--	--
Max.	1289.99	399.23	13.96	3180.98	4072.90	341.48	1283.64	50.92
Min.	13.33	3.18	0.06	65.30	100.11	7.19	13.08	0.94

Sample No.	Ca^{2+} $umol/m^2$	Mg^{2+} $umol/m^2$	H^+ $umol/m^2$	Cation $umol/m^2$	C+A $umol/m^2$	nss-SO_4^{2-} $umol/m^2$	nss-Ca^{2+} $umol/m^2$	EC x ppt. mS/m*mm
25								
26	47.02	16.80	2.16	196.72	334.45	26.18	46.21	2.52
27	624.36	323.51	9.36	2413.83	3299.82	196.86	615.84	34.50
28	515.06	215.37	6.88	1569.38	2435.00	186.80	509.34	22.15
29								
30								

Summary 3

Site name : Chainart agrometeorological station, Chainart

Total	--	--	--	--	--	--	--						--	--	--	--	--	--	--
Mean	10.16	5.50	2.59	0.28	2.98	0.00	--	0.47	0.49	0.48	1.16	0.96	--	7.83	5.28	9.74	31.47	8.96	0.20
Max.	70.02	20.11	12.31	0.80	8.35	0.00	--	1.85	2.27	3.18	8.44	6.18	201.27	17.88	24.68	60.29	94.68	19.83	0.68
Min.	6.98	2.93	0.77	0.06	1.31	0.00	--	0.15	0.02	0.07	0.14	0.07	40.69	0.00	3.34	5.04	21.64	4.68	0.05

Sample No.	SO_4^{2-} ueq/l	NO_3^- ueq/l	Cl^- ueq/l	$HCOO^-$ ueq/l	CH_3COO^- ueq/l	PO_4^{3-} ueq/l	HCO_3^- ueq/l	$C_3H_5O(COO)_3^{3-}$ ueq/l	$C_4H_4O_6^{2-}$ ueq/l	$C_4H_4O_5^{2-}$ ueq/l	$C_4H_4O_4^{2-}$ ueq/l	$C_3H_5O_3^-$ ueq/l	Anion ueq/l	NH_4^+ ueq/l	Na^+ ueq/l	K^+ ueq/l	Ca^{2+} ueq/l	Mg^{2+} ueq/l	H^+ ueq/l
1																			
2	19.61	9.16	7.88	0.66	2.28	0.00	105.54	0.24	1.40	3.18	2.61	2.92	155.49	4.79	10.15	60.29	83.03	9.46	0.05
3																			
4	12.56	14.40	5.49	0.12	2.04	0.00	65.08	0.33	0.19	0.14	0.15	0.12	100.62	17.88	5.16	19.56	48.77	13.43	0.09
5	9.43	6.94	1.99	0.06	1.31	0.00	38.32	0.73	0.02	0.07	0.14	0.27	59.28	5.89	3.58	12.38	37.52	7.84	0.14
6	9.45	2.93	1.41	0.24	1.73	0.00	39.21	0.25	0.14	0.13	0.27	0.20	55.98	3.73	3.87	11.81	33.95	10.51	0.14
7	12.37	7.84	4.05	0.18	1.58	0.00	16.35	0.22	0.09	0.11	0.95	0.07	43.81	6.51	3 34	8.40	28.32	4.68	0.34
8														0.00					
9	6.98	6.02	2.27	0.12	1.49	0.00	37.45	0.24	0.02	0.10	0.14	0.07	54.90	9.17	3.71	11.48	31.70	6.24	0.15
10																			
11																			
12	11.44	5.13	12.31	0.53	7.15	0.00	43.00	1.85	1.12	1.25	0.57	3.45	87.78	4.75	5.25	16.75	54.72	10.11	0.13
13	70.02	20.11	11.52	0.80	7.40	0.00	74.72	1.49	0.79	0.69	8.44	5.30	201.27	9.54	24.68	11.81	94.68	19.83	0.07
14	18.87	15.69	3.83	0.58	5.97	0.00	24.18	1.83	1.89	1.51	3.15	2.66	80.16	5.81	6.51	9.89	49.36	8.93	0.23
15																			
16	19.69	11.63	10.11	0.80	8.35	0.00	44.00	1.20	0.67	0.86	0.54	1.06	98.91	6.80	14.29	19.77	33.32	7.96	0.13
17														0.00					
18														0.00					
19	14.68	12.98	3.35	0.34	3.67	0.00	13.29	0.49	0.19	0.30	2.32	1.73	53.34	6.17	8.60	7.87	26.69	6.65	0.42
20	7.61	3.68	0.77	0.22	4.90	0.00	19.21	0.48	0.23	0.94	1.26	1.40	40.69	7.32	4.46	8.65	22.16	5.93	0.29
21																			
22																			
23																			
24																			

Summary 3

Site name : Chainart agrometeorological station, Chainart

Total	--	--	--	--	--	--	--						--	--	--	--	--	--	--
Mean	10.16	5.50	2.59	0.28	2.98	0.00	--	0.47	0.49	0.48	1.16	0.96	--	7.83	5.28	9.74	31.47	8.96	0.20
Max.	70.02	20.11	12.31	0.80	8.35	0.00	--	1.85	2.27	3.18	8.44	6.18	201.27	17.88	24.68	60.29	94.68	19.83	0.68
Min.	6.98	2.93	0.77	0.06	1.31	0.00	--	0.15	0.02	0.07	0.14	0.07	40.69	0.00	3.34	5.04	21.64	4.68	0.05

Sample No.	SO_4^{2-} ueq/l	NO_3^- ueq/l	Cl^- ueq/l	$HCOO^-$ ueq/l	CH_3COO^- ueq/l	PO_4^{3-} ueq/l	HCO_3^- ueq/l	$C_3H_5O(COO)_3^{3-}$ ueq/l	$C_4H_4O_6^{2-}$ ueq/l	$C_4H_4O_5^{2-}$ ueq/l	$C_4H_4O_4^{2-}$ ueq/l	$C_3H_5O_3^-$ ueq/l	Anion ueq/l	NH_4^+ ueq/l	Na^+ ueq/l	K^+ ueq/l	Ca^{2+} ueq/l	Mg^{2+} ueq/l	H^+ ueq/l
25																			
26	17.77	12.79	8.35	0.37	5.37	0.00	8.19	0.85	0.47	0.31	0.43	6.18	61.07	13.09	11.70	7.94	29.39	10.50	0.68
27	7.65	3.33	1.71	0.40	2.62	0.00	34.15	0.15	0.66	0.91	1.94	0.70	54.22	12.90	6.83	5.04	21.64	11.21	0.16
28	12.59	5.95	2.17	0.50	4.87	0.00	25.91	0.71	2.27	0.49	3.15	2.34	60.94	11.27	8.21	5.49	31.99	13.38	0.21
29																			
30																			

Summary 3 (Cont.)

Site name : Chainart agrometeorological station, Chainart

Total	--	--	--	--	--	--	--	--	340.63	363.90	93.61	
Mean	--	--	--	--	--	0.68	--	--	--	--	--	--
Max.	167.78	361.88	--	9.09	2.54	0.44	--	17.49	64.76415	76.00	224.50	
Min.	48.81	-11.24	--	-11.24	0.62	0.44	--	-7.92	1.80	0.80	82.33	

Sample No.	Cation ueq/l	C+A ueq/l	Req.R1	R1	ECcal mS/m	ECmeas mS/m	Req.R2	R2	Amount of ppt.(cal) M mm	Amount of ppt. R mm	% CE (M/R) %	Sampling period day(s)
1												
2	167.78	323.27	8.00	3.80	2.37	1.95	13.00	9.66	1.86	1.20	154.79	
3												
4	104.88	205.50	8.00	2.08	1.51	1.25	13.00	9.18	3.38	2.50	135.09	
5	67.37	126.64	8.00	6.39	0.92	0.77	13.00	9.02	32.79	27.60	118.80	
6	64.00	119.98	8.00	6.69	0.87	0.67	13.00	12.88	64.76	76.00	85.22	
7	51.60	95.41	15.00	8.17	0.68	0.52	13.00	13.24	32.22	26.80	120.23	
8												
9	62.44	117.34	8.00	6.43	0.86	0.67	13.00	12.09	39.76	48.10	82.66	
10												
11												
12	91.70	179.48	8.00	2.19	1.25	1.15	13.00	4.14	14.98	15.90	94.23	
13	160.61	361.88	8.00	-11.24	2.54	1.97	13.00	12.63	3.62	2.70	134.18	
14	80.73	160.89	8.00	0.36	1.10	0.85	13.00	12.75	8.67	7.80	111.19	
15												
16	82.26	181.18	8.00	-9.19	1.29	1.18	13.00	4.33	1.80	0.80	224.50	
17												
18												
19	56.38	109.72	8.00	2.77	0.75	0.88	13.00	-7.92	15.17	13.00	116.66	
20	48.81	89.50	15.00	9.07	0.62	0.44	20.00	17.49	39.85	48.40	82.33	
21												
22												
23												
24												

Summary 3 (Cont.)

Site name : Chainart agrometeorological station, Chainart

Total	--	--	--	--	--	--	--	--	340.63	363.90	93.61	
Mean	--	--	--	--	--	0.68	--	--	--	--	--	--
Max.	167.78	361.88	--	9.09	2.54	0.44	--	17.49	64.76415	76.00	224.50	
Min.	48.81	-11.24	--	-11.24	0.62	0.44	--	-7.92	1.80	0.80	82.33	

Sample No.	Cation ueq/l	C+A ueq/l	Req.R1	R1	ECcal mS/m	ECmeas mS/m	Req.R2	R2	Amount of ppt.(cal) M mm	Amount of ppt. R mm	% CE (M/R) %	Sampling period day(s)
25												
26	73.29	134.36	8.00	9.09	0.90	0.79	13.00	6.75	3.79	3.20	118.49	
27	57.79	112.01	8.00	3.19	0.80	0.60	13.00	14.47	48.02	57.70	83.22	
28	70.55	131.49	8.00	7.31	0.90	0.69	13.00	13.15	29.96	32.20	93.06	
29												
30												

Form (Wet A) No.1 **Results of wet deposition analysis (Anion)**

Site name : Chainart agrometeorological station, Chainart — Funnel diameter : 288 (mm)

Name of Laboratory : King Mongkut's University of Technology Thonburi

Sample No.	Sampling period				SO_4^{2-}	flg1	flg2	flg3	NO_3^-	flg1	flg2	flg3	Cl^-	flg1	flg2	flg3	$HCOO^-$	flg1	flg2	flg3	CH_3COO^-	flg1	flg2	flg3	PO_4^{3-}	flg1	flg2	flg3
	Start		End																									
	Date	Time	Date	Time	umol/l				umol/l				umol/l				umol/l				umol/l				umol/l			
1	01/10/2012	9:00	02/10/2012	9:00																								
2	02/10/2012	9:00	03/10/2012	9:00																								
3	03/10/2012	9:00	04/10/2012	9:00																								
4	04/10/2012	9:00	05/10/2012	9:00																								
5	05/10/2012	9:00	06/10/2012	9:00	12.80				21.21				10.06				0.53				5.81				0.00			
6	06/10/2012	9:00	07/10/2012	9:00	6.85				12.95				7.85				0.79				29.75				0.00			
7	07/10/2012	9:00	08/10/2012	9:00	35.95				55.37				63.50				1.26				16.07				0.00			
8	08/10/2012	9:00	09/10/2012	9:00	4.63				4.93				3.87				0.32				4.23				0.00			
9	09/10/2012	9:00	10/10/2012	9:00	4.02				5.25				2.05				0.25				6.68				0.00			
10	10/10/2012	9:00	11/10/2012	9:00	5.35				21.12				22.14				0.46				3.11				0.00			
11	11/10/2012	9:00	12/10/2012	9:00																								
12	12/10/2012	9:00	13/10/2012	9:00																								
13	13/10/2012	9:00	14/10/2012	9:00																								
14	14/10/2012	9:00	15/10/2012	9:00																								
15	15/10/2012	9:00	16/10/2012	9:00	34.21				32.05				7.66				0.67				11.20				0.00			
16	16/10/2012	9:00	17/10/2012	9:00																								
17	17/10/2012	9:00	18/10/2012	9:00																								
18	18/10/2012	9:00	19/10/2012	9:00																								
19	19/10/2012	9:00	20/10/2012	9:00																								
20	20/10/2012	9:00	21/10/2012	9:00																								
21	21/10/2012	9:00	22/10/2012	9:00																								
22	22/10/2012	9:00	23/10/2012	9:00																								
23	23/10/2012	9:00	24/10/2012	9:00																								
24	24/10/2012	9:00	25/10/2012	9:00	24.04				31.84				36.76				0.53				4.24				0.00			

Form (Wet A) No.1 **Results of wet deposition analysis (Anion)**

Site name : Chainart agrometeorological station, Chainart

Funnel diameter : 288 (mm)

Name of Laboratory : King Mongkut's University of Technology Thonburi

Sample No.	Sampling period				SO_4^{2-}	flg1	flg2	flg3	NO_3^-	flg1	flg2	flg3	Cl^-	flg1	flg2	flg3	$HCOO^-$	flg1	flg2	flg3	CH_3COO^-	flg1	flg2	flg3	PO_4^{3-}	flg1	flg2	flg3
	Start		End																									
	Date	Time	Date	Time	umol/l				umol/l				umol/l				umol/l				umol/l				umol/l			
25	25/10/2012	9:00	26/10/2012	9:00																								
26	26/10/2012	9:00	27/10/2012	9:00																								
27	27/10/2012	9:00	28/10/2012	9:00																								
28	28/10/2012	9:00	29/10/2012	9:00																								
29	29/10/2012	9:00	30/10/2012	9:00																								
30	30/10/2012	9:00	31/10/2012	9:00	4.47				10.74				4.08				0.52				2.52				0.00			
31	31/10/2012	9:00	01/11/2012	9:00	1.82				9.71				3.00				0.52				3.87				0.00			

Form (Wet A) No.1 (Cont.) **Results of wet deposition analysis (Anion)**

Sample No.	$C_3H_5O(COO)_3^{3-}$	flg1	flg2	flg3	$C_4H_4O_6^{2-}$	flg1	flg2	flg3	$C_4H_4O_5^{2-}$	flg1	flg2	flg3	$C_4H_4O_4^{2-}$	flg1	flg2	flg3	$C_3H_5O_3^{-}$
	umol/l				umol/l				umol/l				umol/l				umol/l
1																	
2																	
3																	
4																	
5	0.30				0.44				0.80				3.62				4.98
6	0.26				0.48				0.25				2.17				9.36
7	0.34				0.17				1.26				7.23				13.97
8	0.38				0.67				0.19				2.68				0.40
9	0.26				0.31				0.40				1.21				0.74
10	0.23				0.34				0.33				1.15				1.73
11																	
12																	
13																	
14																	
15	0.36				0.42				0.12				2.50				0.72
16																	
17																	
18																	
19																	
20																	
21																	
22																	
23																	
24	0.59				1.27				0.10				4.66				1.48

Form (Wet A) No.1 (Cont.)	Results of wet deposition analysis (Anion)																	
Sample No.	$C_3H_5O(COO)_3^{3-}$	flg1	flg2	flg3	$C_4H_4O_6^{2-}$	flg1	flg2	flg3	$C_4H_4O_5^{2-}$	flg1	flg2	flg3	$C_4H_4O_4^{2-}$	flg1	flg2	flg3	$C_3H_5O_3^-$	
	umol/l				umol/l				umol/l				umol/l				umol/l	
25																		
26																		
27																		
28																		
29																		
30	0.73				1.27				0.17				1.49				0.59	
31	0.47				0.98				0.33				0.92				0.75	

Form (Wet A) No.2 Results of wet deposition analysis (Cation)

Site name : Chainart agrometeorological station, Chainart Funnel diameter : 288 (mm)

Name of Laboratory : King Mongkut's University of Technology Thonburi

Sample No.	Sampling period				NH_4^+	flg1	flg2	flg3	Na^+	flg1	flg2	flg3	K^+	flg1	flg2	flg3	Ca^{2+}	flg1	flg2	flg3	Mg^{2+}	flg1	flg2	flg3		flg1	flg2	flg3
	Start		End																									
	Date	Time	Date	Time	umol/l				umol/l				umol/l				umol/l				umol/l							
1																												
2																												
3																												
4																												
5					10.07				9.26				22.76				27.25				7.59							
6					7.11				9.95				19.21				19.20				4.22							
7					20.39				27.60				27.74				30.16				9.03							
8					6.04				8.33				4.34				8.29				2.37							
9					8.36				5.12				7.01				9.91				3.83							
10					9.18				17.47				12.00				21.33				9.55							
11																												
12																												
13																												
14																												
15					11.59				2.38				14.44				43.69				3.34							
16																												
17																												
18																												
19																												
20																												
21																												
22																												
23																												
24					16.71				25.52				7.92				80.26				2.90							

Form (Wet A) No.2 Results of wet deposition analysis (Cation)

Site name : Chainart agrometeorological station, Chainart — Funnel diameter : 288 (mm)

Name of Laboratory : King Mongkut's University of Technology Thonburi

Sample No.	Sampling period				NH_4^+	flg1	flg2	flg3	Na^+	flg1	flg2	flg3	K^+	flg1	flg2	flg3	Ca^{2+}	flg1	flg2	flg3	Mg^{2+}	flg1	flg2	flg3		flg1	flg2	flg3
	Start		End																									
	Date	Time	Date	Time	umol/l				umol/l				umol/l				umol/l				umol/l							
25																												
26																												
27																												
28																												
29																												
30					9.82				2.63				4.53				40.21				3.61							
31					10.17				2.81				4.69				22.31				11.77							

Form (Wet A) No.3 Results of wet deposition analysis(EC, pH, R1 ,R2, Precipitation)

Site name : Chainart agrometeorological station, Chainart

Funnel diameter : 288 (mm)

Name of Laboratory : King Mongkut's University of Technology Thonbur

Method Code 1: Rain Gauge 2: Calculation by sample amount 3: others

Sample No.	Sampling period				EC	flg1	flg2	flg3	pH	flg1	flg2	flg3	R1	flg1	flg2	flg3	R2	flg1	flg2	flg3	Amount of sample	flg1	flg2	flg3	Amount of precipitation	Method Code	flg1	flg2	flg3
	Start		End																										
	Date	Time	Date	Time	mS/m																g				mm				
1																													
2																													
3																													
4																													
5					1.34				6.77												239.00				2.80				
6					0.78				6.13												218.00				2.40				
7					3.01				5.93												117.00				0.80				
8					0.37				6.17												2199.00				39.00				
9					0.42				6.40												977.00				15.90				
10					1.46				6.59												965.00				15.70				
11																													
12																													
13																													
14																													
15					2.17				5.69												494.00				6.00				
16																													
17																													
18																													
19																													
20																													
21																													
22																													
23																													
24					3.23				7.12												224.00				2.60				

Form (Wet A) No.3 Results of wet deposition analysis(EC, pH, R1 ,R2, Precipitation)

Site name : Chainart agrometeorological station, Chainart

Funnel diameter : 288 (mm)

Name of Laboratory : King Mongkut's University of Technology Thonbur

Method Code 1: Rain Gauge 2: Calculation by sample amount 3: others

Sample No.	Sampling period				EC	flg1	flg2	flg3	pH	flg1	flg2	flg3	R1	flg1	flg2	flg3	R2	flg1	flg2	flg3	Amount of sample	flg1	flg2	flg3	Amount of precipitation	Method Code	flg1	flg2	flg3
	Start		End																										
	Date	Time	Date	Time	mS/m																g				mm				
25																													
26																													
27																													
28																													
29																													
30					1.10				7.07												1965.00				33.60				
31					0.96				6.98												893.00				9.50				

Summary 1

Site name : Chainart agrometeorological station, Chainart

	SO_4^{2-}	nss-SO_4^{2-}	NO_3^-	Cl^-	$HCOO^-$	CH_3COO^-	$C_3H_3O(COO)_3^{3-}$	$C_4H_4O_6^{2-}$	$C_4H_4O_5^{2-}$	$C_4H_4O_4^{2-}$	$C_3H_5O_3^-$	PO_4^{3-}	NH_4^+	Na^+
Sample No.	umol/l	umol/l	umol/l	umol/l	umol/l	umol/l	umol/l	umol/l	umol/l	umol/l	umol/l	umol/l	umol/l	umol/l
Total														
Mean	6.58	6.14	11.46	7.30	0.43	4.83	0.44	0.75	0.25	1.94	1.07	0.00	8.68	7.39
Max.	35.95	34.29	55.37	63.50	1.26	29.75	0.73	1.27	1.26	7.23	13.97	0.00	20.39	27.60
Min.	1.82	1.65	4.93	2.05	0.25	2.52	0.23	0.17	0.10	0.92	0.40	0.40	6.04	2.38
1														
2														
3														
4														
5	12.80	12.24	21.21	10.06	0.53	5.81	0.30	0.44	0.80	3.62	4.98	0.00	10.07	9.26
6	6.85	6.25	12.95	7.85	0.79	29.75	0.26	0.48	0.25	2.17	9.36	0.00	7.11	9.95
7	35.95	34.29	55.37	63.50	1.26	16.07	0.34	0.17	1.26	7.23	13.97	0.00	20.39	27.60
8	4.63	4.12	4.93	3.87	0.32	4.23	0.38	0.67	0.19	2.68	0.40	0.00	6.04	8.33
9	4.02	3.71	5.25	2.05	0.25	6.68	0.26	0.31	0.40	1.21	0.74	0.00	8.36	5.12
10	5.35	4.29	21.12	22.14	0.46	3.11	0.23	0.34	0.33	1.15	1.73	0.00	9.18	17.47
11														
12														
13														
14														
15	34.21	34.06	32.05	7.66	0.67	11.20	0.36	0.42	0.12	2.50	0.72	0.00	11.59	2.38
16														
17														
18														
19														
20														
21														
22														
23														
24	24.04	22.50	31.84	36.76	0.53	4.24	0.59	1.27	0.10	4.66	1.48	0.00	16.71	25.52

Summary 1														
Site name :		Chainart agrometeorological station, Chainart												
Total														
Mean	6.58	6.14	11.46	7.30	0.43	4.83	0.44	0.75	0.25	1.94	1.07	0.00	8.68	7.39
Max.	35.95	34.29	55.37	63.50	1.26	29.75	0.73	1.27	1.26	7.23	13.97	0.00	20.39	27.60
Min.	1.82	1.65	4.93	2.05	0.25	2.52	0.23	0.17	0.10	0.92	0.40	0.40	6.04	2.38
Sample No.	SO_4^{2-}	nss-SO_4^{2-}	NO_3^-	Cl^-	$HCOO^-$	CH_3COO^-	$C_3H_5O(COO)_3^{3-}$	$C_4H_4O_6^{2-}$	$C_4H_4O_5^{2-}$	$C_4H_4O_4^{2-}$	$C_3H_5O_3^-$	PO_4^{3-}	NH_4^+	Na^+
	umol/l	umol/l	umol/l	umol/l	umol/l	umol/l	umol/l	umol/l	umol/l	umol/l	umol/l	umol/l	umol/l	umol/l
25														
26														
27														
28														
29														
30	4.47	4.31	10.74	4.08	0.52	2.52	0.73	1.27	0.17	1.49	0.59	0.00	9.82	2.63
31	1.82	1.65	9.71	3.00	0.52	3.87	0.47	0.98	0.33	0.92	0.75	0.00	10.17	2.81

Summary 1 (Cont.)

Site name : Chainart agrometeorological station, Chainart

Total							
Mean	7.06	23.35	23.19	4.69	0.44	6.36	0.93
Max.	27.74	80.26	79.71	11.77	2.04	7.12	3.23
Min.	4.34	8.29	8.11	2.37	0.08	5.69	0.37

Sample No.	K^+	Ca^{2+}	nss-Ca^{2+}	Mg^{2+}	H^+	pH	EC
	umol/l	umol/l	umol/l	umol/l	umol/l		mS/m
1							
2							
3							
4							
5	22.76	27.25	27.05	7.59	0.17	6.77	1.34
6	19.21	19.20	18.99	4.22	0.74	6.13	0.78
7	27.74	30.16	29.56	9.03	1.17	5.93	3.01
8	4.34	8.29	8.11	2.37	0.68	6.17	0.37
9	7.01	9.91	9.80	3.83	0.40	6.40	0.42
10	12.00	21.33	20.96	9.55	0.26	6.59	1.46
11							
12							
13							
14							
15	14.44	43.69	43.64	3.34	2.04	5.69	2.17
16							
17							
18							
19							
20							
21							
22							
23							
24	7.92	80.26	79.71	2.90	0.08	7.12	3.23

Summary 1 (Cont.)							
Site name :		Chainart agrometeorological station, Chainart					
Total							
Mean	7.06	23.35	23.19	4.69	0.44	6.36	0.93
Max.	27.74	80.26	79.71	11.77	2.04	7.12	3.23
Min.	4.34	8.29	8.11	2.37	0.08	5.69	0.37
Sample No.	K^+	Ca^{2+}	nss-Ca^{2+}	Mg^{2+}	H^+	pH	EC
	umol/l	umol/l	umol/l	umol/l	umol/l		mS/m
25							
26							
27							
28							
29							
30	4.53	40.21	40.15	3.61	0.09	7.07	1.10
31	4.69	22.31	22.25	11.77	0.10	6.98	0.96

Summary 2

Site name : Chainart agrometeorological station, Chainart

	SO_4^{2-}	NO_3^-	Cl^-	$HCOO^-$	CH_3COO^-	$C_3H_5O(COO)_3^{3-}$	$C_4H_4O_6^{2-}$	$C_4H_4O_5^{2-}$	$C_4H_4O_4^{2-}$	$C_3H_5O_3^-$	PO_4^{3-}	Anion	NH_4^+	Na^+	K^+
	umol/m^2	umol/m^2	umol/m^2	umol/m^2	umol/m^2	umol/m^2	umol/m^2	umol/m^2	umol/m^2	umol/m^2	umol/m^2	umol/m^2	umol/m^2	umol/m^2	umol/m^2
Total	844.52	1470.06	936.32	55.51	620.10	56.72	96.38	32.71	248.61	136.99	0.00	4497.91	1113.80	948.09	905.17
Mean											--	--	--	--	--
Max.	205.23	360.82	347.66	17.32	164.97	24.50	42.64	7.53	104.50	27.18	0.00	892.67	330.04	324.86	188.36
Min.	16.44	31.08	18.85	1.01	11.01	0.27	0.13	0.27	5.20	3.84	0.00	156.09	16.31	14.28	20.58
1															
2															
3															
4															
5	35.83	59.38	28.18	1.49	16.26	0.84	1.23	2.24	10.12	13.94	0.00	169.51	28.19	25.92	63.74
6	16.44	31.08	18.85	1.89	71.40	0.62	1.14	0.59	5.20	22.47	0.00	169.68	17.06	23.89	46.11
7	28.76	44.30	50.80	1.01	12.86	0.27	0.13	1.01	5.78	11.18	0.00	156.09	16.31	22.08	22.19
8	180.38	192.08	151.05	12.31	164.97	14.64	25.94	7.53	104.50	15.41	0.00	868.82	235.64	324.86	169.27
9	63.97	83.49	32.52	3.92	106.16	4.08	4.88	6.37	19.19	11.80	0.00	336.37	132.91	81.47	111.46
10	83.96	331.57	347.66	7.26	48.85	3.61	5.33	5.16	18.12	27.18	0.00	878.70	144.12	274.25	188.36
11															
12															
13															
14															
15	205.23	192.32	45.95	4.00	67.20	2.19	2.51	0.71	14.98	4.33	0.00	539.42	69.51	14.28	86.62
16															
17															
18															
19															
20															
21															
22															
23															
24	62.50	82.78	95.59	1.39	11.01	1.55	3.30	0.27	12.11	3.84	0.00	274.32	43.44	66.34	20.58

Summary 2															
Site name :		Chainart agrometeorological station, Chainart													
Total	844.52	1470.06	936.32	55.51	620.10	56.72	96.38	32.71	248.61	136.99	0.00	4497.91	1113.80	948.09	905.17
Mean											--	--	--	--	--
Max.	205.23	360.82	347.66	17.32	164.97	24.50	42.64	7.53	104.50	27.18	0.00	892.67	330.04	324.86	188.36
Min.	16.44	31.08	18.85	1.01	11.01	0.27	0.13	0.27	5.20	3.84	0.00	156.09	16.31	14.28	20.58
Sample No.	SO_4^{2-}	NO_3^-	Cl^-	$HCOO^-$	CH_3COO^-	$C_3H_5O(COO)_3^{3-}$	$C_4H_4O_6^{2-}$	$C_4H_4O_5^{2-}$	$C_4H_4O_4^{2-}$	$C_3H_5O_3^-$	PO_4^{3-}	Anion	NH_4^+	Na^+	K^+
	umol/m^2	umol/m^2	umol/m^2	umol/m^2	umol/m^2	umol/m^2	umol/m^2	umol/m^2	umol/m^2	umol/m^2	umol/m^2	umol/m^2	umol/m^2	umol/m^2	umol/m^2
25															
26															
27															
28															
29															
30	150.16	360.82	137.24	17.32	84.65	24.50	42.64	5.70	49.91	19.73	0.00	892.67	330.04	88.27	152.27
31	17.28	92.26	28.49	4.92	36.73	4.43	9.27	3.14	8.70	7.11	0.00	212.32	96.58	26.74	44.56

Summary 2 (Cont.)

Site name : Chainart agrometeorological station, Chainart

Total	2996.20	602.36	56.23	6621.85	11119.76	787.37	2975.71	119.31
Mean	--	--	--	--	--	--	--	--
Max.	1351.04	149.96	26.37	2045.71	2938.38	204.37	1349.13	36.86
Min.	24.13	7.23	0.20	92.88	248.97	15.00	23.65	1.87

Sample No.	Ca^{2+}	Mg^{2+}	H^{+}	Cation	C+A	nss-SO_4^{2-}	nss-Ca^{2+}	EC x ppt.
	$\mu mol/m^2$	$\mu mol/m^2$	$\mu mol/m^2$	$\mu mol/m^2$	$\mu mol/m^2$	$\mu mol/m^2$	$\mu mol/m^2$	mS/m*mm
1								
2								
3								
4								
5	76.31	21.24	0.48	215.87	385.38	34.26	75.75	3.75
6	46.08	10.14	1.78	145.05	314.73	15.00	45.57	1.87
7	24.13	7.23	0.94	92.88	248.97	27.43	23.65	2.41
8	323.35	92.41	26.37	1171.89	2040.70	160.80	316.33	14.35
9	157.57	60.83	6.33	550.57	886.95	59.06	155.81	6.68
10	334.96	149.96	4.04	1095.69	1974.39	67.43	329.03	22.91
11								
12								
13								
14								
15	262.16	20.02	12.25	464.83	1004.25	204.37	261.85	13.02
16								
17								
18								
19								
20								
21								
22								
23								
24	208.68	7.53	0.20	346.77	621.09	58.50	207.25	8.40

Summary 2 (Cont.)								
Site name :		Chainart agrometeorological station, Chainart						
Total	2996.20	602.36	56.23	6621.85	11119.76	787.37	2975.71	119.31
Mean	--	--	--	--	--	--	--	--
Max.	1351.04	149.96	26.37	2045.71	2938.38	204.37	1349.13	36.86
Min.	24.13	7.23	0.20	92.88	248.97	15.00	23.65	1.87
Sample No.	Ca^{2+}	Mg^{2+}	H^{+}	Cation	C+A	nss-SO_4^{2-}	nss-Ca^{2+}	EC x ppt.
	$umol/m^2$	$umol/m^2$	$umol/m^2$	$umol/m^2$	$umol/m^2$	$umol/m^2$	$umol/m^2$	mS/m*mm
25								
26								
27								
28								
29								
30	1351.04	121.21	2.86	2045.71	2938.38	144.84	1349.13	36.86
31	211.92	111.80	0.99	492.60	704.92	15.67	211.35	9.07

Summary 3

Site name : Chainart agrometeorological station, Chainart

	SO_4^{2-}	NO_3^-	Cl^-	$HCOO^-$	CH_3COO^-	PO_4^{3-}	HCO_3^-	$C_3H_5O(COO)_3^{3-}$	$C_4H_4O_6^{2-}$	$C_4H_4O_5^{2-}$	$C_4H_4O_4^{2-}$	$C_3H_5O_3^-$	Anion	NH_4^+	Na^+	K^+	Ca^{2+}	Mg^{2+}	H^+
Total	--	--	--	--	--	--	--						--	--	--	--	--	--	--
Mean	13.16	11.46	7.30	0.43	4.83	0.00	--	1.33	1.50	0.51	1.94	1.07	--	8.68	7.39	7.06	46.71	9.39	0.44
Max.	71.90	55.37	63.50	1.26	29.75	0.00	--	2.19	2.54	2.52	7.23	13.97	233.17	20.39	27.60	27.74	160.52	23.54	2.04
Min.	3.64	4.93	2.05	0.25	2.52	1.19	--	0.69	0.33	0.20	0.92	0.40	36.70	6.04	2.38	4.34	16.58	4.74	0.08

Sample No.	SO_4^{2-}	NO_3^-	Cl^-	$HCOO^-$	CH_3COO^-	PO_4^{3-}	HCO_3^-	$C_3H_5O(COO)_3^{3-}$	$C_4H_4O_6^{2-}$	$C_4H_4O_5^{2-}$	$C_4H_4O_4^{2-}$	$C_3H_5O_3^-$	Anion	NH_4^+	Na^+	K^+	Ca^{2+}	Mg^{2+}	H^+
	ueq/l	ueq/l	ueq/l	ueq/l	ueq/l	ueq/l	ueq/l	ueq/l	ueq/l	ueq/l	ueq/l	ueq/l	ueq/l	ueq/l	ueq/l	ueq/l	ueq/l	ueq/l	ueq/l
1																			
2																			
3																			
4																			
5	25.59	21.21	10.06	0.53	5.81	0.00	32.62	0.90	0.88	1.60	3.62	4.98	107.79	10.07	9.26	22.76	54.51	15.17	0.17
6	13.70	12.95	7.85	0.79	29.75	0.00	7.47	0.77	0.95	0.49	2.17	9.36	86.26	7.11	9.95	19.21	38.40	8.45	0.74
7	71.90	55.37	63.50	1.26	16.07	0.00		1.01	0.33	2.52	7.23	13.97	233.17	20.39	27.60	27.74	60.32	18.07	1.17
8	9.25	4.93	3.87	0.32	4.23	0.00	8.19	1.13	1.33	0.39	2.68	0.40	36.70	6.04	8.33	4.34	16.58	4.74	0.68
9	8.05	5.25	2.05	0.25	6.68	0.00	13.91	0.77	0.61	0.80	1.21	0.74	40.31	8.36	5.12	7.01	19.82	7.65	0.40
10	10.70	21.12	22.14	0.46	3.11	0.00	21.55	0.69	0.68	0.66	1.15	1.73	83.99	9.18	17.47	12.00	42.67	19.10	0.26
11																			
12																			
13																			
14																			
15	68.41	32.05	7.66	0.67	11.20	0.00		1.09	0.84	0.24	2.50	0.72	125.37	11.59	2.38	14.44	87.39	6.67	2.04
16																			
17																			
18																			
19																			
20																			
21																			
22																			
23																			
24	48.08	31.84	36.76	0.53	4.24	0.00	73.02	1.78	2.54	0.20	4.66	1.48	205.12	16.71	25.52	7.92	160.52	5.79	0.08

Summary 3																			
Site name :		Chainart agrometeorological station, Chainart																	
Total	--	--	--	--	--	--	--						--	--	--	--	--	--	--
Mean	13.16	11.46	7.30	0.43	4.83	0.00	--	1.33	1.50	0.51	1.94	1.07	--	8.68	7.39	7.06	46.71	9.39	0.44
Max.	71.90	55.37	63.50	1.26	29.75	0.00	--	2.19	2.54	2.52	7.23	13.97	233.17	20.39	27.60	27.74	160.52	23.54	2.04
Min.	3.64	4.93	2.05	0.25	2.52	1.19	--	0.69	0.33	0.20	0.92	0.40	36.70	6.04	2.38	4.34	16.58	4.74	0.08
Sample No.	SO_4^{2-}	NO_3^-	Cl^-	$HCOO^-$	CH_3COO^-	PO_4^{3-}	HCO_3^-	$C_3H_5O(COO)_3^{3-}$	$C_4H_4O_6^{2-}$	$C_4H_4O_5^{2-}$	$C_4H_4O_4^{2-}$	$C_3H_5O_3^-$	Anion	NH_4^+	Na^+	K^+	Ca^{2+}	Mg^{2+}	H^+
	ueq/l	ueq/l	ueq/l	ueq/l	ueq/l	ueq/l	ueq/l	ueq/l	ueq/l	ueq/l	ueq/l	ueq/l	ueq/l	ueq/l	ueq/l	ueq/l	ueq/l	ueq/l	ueq/l
25																			
26																			
27																			
28																			
29																			
30	8.94	10.74	4.08	0.52	2.52	0.00	65.08	2.19	2.54	0.34	1.49	0.59	99.01	9.82	2.63	4.53	80.42	7.22	0.09
31	3.64	9.71	3.00	0.52	3.87	0.00	52.90	1.40	1.95	0.66	0.92	0.75	79.30	10.17	2.81	4.69	44.62	23.54	0.10

Summary 3 (Cont.)

Site name : Chainart agrometeorological station, Chainart

Total	--	--	--	--	--	--	--	--	127.27	128.30	99.20	
Mean	--	--	--	--	--	0.93	--	--	--	--	--	--
Max.	216.53	421.65	--	9.08	2.93	3.23	--	18.24	33.755953	39.00	224.50	
Min.	40.71	77.41	--	-20.05	0.53	0.37	--	-10.75	1.80	0.80	86.55	

Sample No.	Cation	C+A	Req.R1	R1	ECcal	ECmeas	Req.R2	R2	Amount of ppt.(cal)	Amount of ppt.	% CE (M/R)	Sampling period
	ueq/l	ueq/l			mS/m	mS/m			M mm	R mm	%	day(s)
1												
2												
3												
4												
5	111.93	219.72	8.00	1.89	1.51	1.34	13.00	6.11	3.67	2.80	131.03	1
6	83.86	170.13	8.00	-1.41	1.06	0.78	13.00	15.29	3.35	2.40	139.43	1
7	155.29	388.46	8.00	-20.05	2.64	3.01	9.00	-6.57	1.80	0.80	224.50	1
8	40.71	77.41	15.00	5.17	0.53	0.37	20.00	18.24	33.76	39.00	86.55	1
9	48.36	88.68	15.00	9.08	0.61	0.42	20.00	18.10	15.00	15.90	94.32	1
10	100.68	184.67	8.00	9.03	1.25	1.46	13.00	-7.80	14.81	15.70	94.35	1
11												
12												
13												
14												
15	124.50	249.88	8.00	-0.35	1.75	2.17	13.00	-10.75	7.58	6.00	126.39	1
16												
17												
18												
19												
20												
21												
22												
23												
24	216.53	421.65	8.00	2.71	2.93	3.23	9.00	-4.92	3.44	2.60	132.25	1

Summary 3 (Cont.)												
Site name :		Chainart agrometeorological station, Chainart										
Total	--	--	--	--	--	--	--	--	127.27	128.30	99.20	
Mean	--	--	--	--	--	0.93	--	--	--	--	--	--
Max.	216.53	421.65	--	9.08	2.93	3.23	--	18.24	33.755953	39.00	224.50	
Min.	40.71	77.41	--	-20.05	0.53	0.37	--	-10.75	1.80	0.80	86.55	
Sample No.	Cation	C+A	Req.R1	R1	ECcal	ECmeas	Req.R2	R2	Amount of ppt.(cal)	Amount of ppt.	% CE (M/R)	Sampling period
	ueq/l	ueq/l			mS/m	mS/m			M mm	R mm	%	day(s)
25												
26												
27												
28												
29												
30	104.70	203.71	8.00	2.79	1.46	1.10	13.00	14.07	30.16	33.60	89.77	1
31	85.93	165.23	8.00	4.01	1.16	0.96	13.00	9.85	13.71	9.50	144.30	1

Form (Wet A) No.1 Results of wet deposition analysis (Anion)

Site name : Chainart agrometeorological station, Chainart

Funnel diameter : 288 (mm)

Name of Laboratory : King Mongkut's University of Technology Thonburi

Sample No.	Sampling period				SO_4^{2-}	flg1	flg2	flg3	NO_3^-	flg1	flg2	flg3	Cl^-	flg1	flg2	flg3	$HCOO^-$	flg1	flg2	flg3	CH_3COO^-	flg1	flg2	flg3	PO_4^{3-}	flg1	flg2	flg3
	Start		End																									
	Date	Time	Date	Time	umol/l				umol/l				umol/l				umol/l				umol/l				umol/l			
1	01/11/2012	9:00	02/11/2012	9:00																								
2	02/11/2012	9:00	03/11/2012	9:00																								
3	03/11/2012	9:00	04/11/2012	9:00																								
4	04/11/2012	9:00	05/11/2012	9:00																								
5	05/11/2012	9:00	06/11/2012	9:00																								
6	06/11/2012	9:00	07/11/2012	9:00																								
7	07/11/2012	9:00	08/11/2012	9:00																								
8	08/11/2012	9:00	09/11/2012	9:00																								
9	09/11/2012	9:00	10/11/2012	9:00																								
10	10/11/2012	9:00	11/11/2012	9:00																								
11	11/11/2012	9:00	12/11/2012	9:00	7.36				17.34				5.47				0.07				0.94				0.00			
12	12/11/2012	9:00	13/11/2012	9:00																								
13	13/11/2012	9:00	14/11/2012	9:00																								
14	14/11/2012	9:00	15/11/2012	9:00																								
15	15/11/2012	9:00	16/11/2012	9:00																								
16	16/11/2012	9:00	17/11/2012	9:00																								
17	17/11/2012	9:00	18/11/2012	9:00	10.81				19.19				14.42				0.29				4.85				0.00			
18	18/11/2012	9:00	19/11/2012	9:00																								
19	19/11/2012	9:00	20/11/2012	9:00																								
20	20/11/2012	9:00	21/11/2012	9:00	7.54				23.36				13.38				0.55				2.18				0.00			
21	21/11/2012	9:00	22/11/2012	9:00																								
22	22/11/2012	9:00	23/11/2012	9:00																								
23	23/11/2012	9:00	24/11/2012	9:00																								
24	24/11/2012	9:00	25/11/2012	9:00	15.85				42.11				10.09				4.86				5.11				0.00			

Form (Wet A) No.1 Results of wet deposition analysis (Anion)

Site name : Chainart agrometeorological station, Chainart

Funnel diameter : 288 (mm)

Name of Laboratory : King Mongkut's University of Technology Thonburi

Sample No.	Sampling period				SO_4^{2-}	flg1	flg2	flg3	NO_3^-	flg1	flg2	flg3	Cl^-	flg1	flg2	flg3	$HCOO^-$	flg1	flg2	flg3	CH_3COO^-	flg1	flg2	flg3	PO_4^{3-}	flg1	flg2	flg3
	Start		End																									
	Date	Time	Date	Time	umol/l				umol/l				umol/l				umol/l				umol/l				umol/l			
25	25/11/2012	9:00	26/11/2012	9:00																								
26	26/11/2012	9:00	27/11/2012	9:00																								
27	27/11/2012	9:00	28/11/2012	9:00																								
28	28/11/2012	9:00	29/11/2012	9:00																								
29	29/11/2012	9:00	30/11/2012	9:00																								
30	30/11/2012	9:00	01/12/2012	9:00																								

Form (Wet A) No.1 (Cont.) Results of wet deposition analysis (Anion)

Sample No.	$C_3H_5O(COO)_3^{3-}$ umol/l	flg1	flg2	flg3	$C_4H_4O_6^{2-}$ umol/l	flg1	flg2	flg3	$C_4H_4O_5^{2-}$ umol/l	flg1	flg2	flg3	$C_4H_4O_4^{2-}$ umol/l	flg1	flg2	flg3	$C_3H_5O_3^{-}$ umol/l
1																	
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	
11	0.47				0.09				0.22				0.20				0.11
12																	
13																	
14																	
15																	
16																	
17	0.58				0.50				0.24				3.55				3.16
18																	
19																	
20	0.88				0.19				0.63				0.97				1.09
21																	
22																	
23																	
24	0.92				0.50				0.89				5.22				2.69

Sample No.	$C_3H_5O(COO)_3^{3-}$ umol/l	flg1	flg2	flg3	$C_4H_4O_6^{2-}$ umol/l	flg1	flg2	flg3	$C_4H_4O_5^{2-}$ umol/l	flg1	flg2	flg3	$C_4H_4O_4^{2-}$ umol/l	flg1	flg2	flg3	$C_3H_5O_3^{-}$ umol/l
25																	
26																	
27																	
28																	
29																	
30																	

Form (Wet A) No.2 **Results of wet deposition analysis (Cation)**

Site name : Chainart agrometeorological station, Chainart

Funnel diameter : 288 (mm)

Name of Laboratory : King Mongkut's University of Technology Thonburi

Sample No.	Sampling period				NH_4^+	flg1	flg2	flg3	Na^+	flg1	flg2	flg3	K^+	flg1	flg2	flg3	Ca^{2+}	flg1	flg2	flg3	Mg^{2+}	flg1	flg2	flg3		flg1	flg2	flg3
	Start		End																									
	Date	Time	Date	Time	umol/l				umol/l				umol/l				umol/l				umol/l							
1	01/11/2012	9:00	02/11/2012	9:00																								
2	02/11/2012	9:00	03/11/2012	9:00																								
3	03/11/2012	9:00	04/11/2012	9:00																								
4	04/11/2012	9:00	05/11/2012	9:00																								
5	05/11/2012	9:00	06/11/2012	9:00																								
6	06/11/2012	9:00	07/11/2012	9:00																								
7	07/11/2012	9:00	08/11/2012	9:00																								
8	08/11/2012	9:00	09/11/2012	9:00																								
9	09/11/2012	9:00	10/11/2012	9:00																								
10	10/11/2012	9:00	11/11/2012	9:00																								
11	11/11/2012	9:00	12/11/2012	9:00	11.48				3.80				16.63				51.89				3.27							
12	12/11/2012	9:00	13/11/2012	9:00																								
13	13/11/2012	9:00	14/11/2012	9:00																								
14	14/11/2012	9:00	15/11/2012	9:00																								
15	15/11/2012	9:00	16/11/2012	9:00																								
16	16/11/2012	9:00	17/11/2012	9:00																								
17	17/11/2012	9:00	18/11/2012	9:00	11.95				3.82				10.22				21.64				3.83							
18	18/11/2012	9:00	19/11/2012	9:00																								
19	19/11/2012	9:00	20/11/2012	9:00																								
20	20/11/2012	9:00	21/11/2012	9:00	8.29				2.95				6.87				29.59				6.19							
21	21/11/2012	9:00	22/11/2012	9:00																								
22	22/11/2012	9:00	23/11/2012	9:00																								
23	23/11/2012	9:00	24/11/2012	9:00																								
24	24/11/2012	9:00	25/11/2012	9:00	22.52				5.29				8.75				26.28				3.28							

Form (Wet A) No.2 **Results of wet deposition analysis (Cation)**

Site name : Chainart agrometeorological station, Chainart

Funnel diameter : 288 (mm)

Name of Laboratory : King Mongkut's University of Technology Thonburi

Sample No.	Sampling period				NH_4^+	flg1	flg2	flg3	Na^+	flg1	flg2	flg3	K^+	flg1	flg2	flg3	Ca^{2+}	flg1	flg2	flg3	Mg^{2+}	flg1	flg2	flg3		flg1	flg2	flg3
	Start		End																									
	Date	Time	Date	Time	umol/l				umol/l				umol/l				umol/l				umol/l							
25	25/11/2012	9:00	26/11/2012	9:00																								
26	26/11/2012	9:00	27/11/2012	9:00																								
27	27/11/2012	9:00	28/11/2012	9:00																								
28	28/11/2012	9:00	29/11/2012	9:00																								
29	29/11/2012	9:00	30/11/2012	9:00																								
30	30/11/2012	9:00	01/12/2012	9:00																								

Form (Wet A) No.3 Results of wet deposition analysis(EC, pH, R1 ,R2, Precipitation)

Site name : Chainart agrometeorological station, Chainart

Funnel diameter : 288 (mm)

Name of Laboratory : King Mongkut's University of Technology Thonburi

Method Code 1: Rain Gauge 2: Calculation by sample amount 3: others

Sample No.	Sampling period				EC	flg1	flg2	flg3	pH	flg1	flg2	flg3	R1	flg1	flg2	flg3	R2	flg1	flg2	flg3	Amount of sample	flg1	flg2	flg3	Amount of precipitation	Method Code	flg1	flg2	flg3
	Start		End																										
	Date	Time	Date	Time	mS/m																g				mm				
1	01/11/2012	9:00	02/11/2012	9:00																									
2	02/11/2012	9:00	03/11/2012	9:00																									
3	03/11/2012	9:00	04/11/2012	9:00																									
4	04/11/2012	9:00	05/11/2012	9:00																									
5	05/11/2012	9:00	06/11/2012	9:00																									
6	06/11/2012	9:00	07/11/2012	9:00																									
7	07/11/2012	9:00	08/11/2012	9:00																									
8	08/11/2012	9:00	09/11/2012	9:00																									
9	09/11/2012	9:00	10/11/2012	9:00																									
10	10/11/2012	9:00	11/11/2012	9:00																									
11	11/11/2012	9:00	12/11/2012	9:00	1.53				7.18												899.00				10.80				
12	12/11/2012	9:00	13/11/2012	9:00																									
13	13/11/2012	9:00	14/11/2012	9:00																									
14	14/11/2012	9:00	15/11/2012	9:00																									
15	15/11/2012	9:00	16/11/2012	9:00																									
16	16/11/2012	9:00	17/11/2012	9:00																									
17	17/11/2012	9:00	18/11/2012	9:00	1.38				6.52												203.00				2.00				
18	18/11/2012	9:00	19/11/2012	9:00																									
19	19/11/2012	9:00	20/11/2012	9:00																									
20	20/11/2012	9:00	21/11/2012	9:00	1.34				6.61												494.00				6.40				
21	21/11/2012	9:00	22/11/2012	9:00																									
22	22/11/2012	9:00	23/11/2012	9:00																									
23	23/11/2012	9:00	24/11/2012	9:00																									
24	24/11/2012	9:00	25/11/2012	9:00	1.71				5.86												586.00				8.00				

Form (Wet A) No.3 Results of wet deposition analysis(EC, pH, R1 ,R2, Precipitation)

Site name : Chainart agrometeorological station, Chainart

Funnel diameter : 288 (mm)

Name of Laboratory : King Mongkut's University of Technology Thonburi

Method Code 1: Rain Gauge 2: Calculation by sample amount 3: others

Sample No.	Sampling period				EC	flg1	flg2	flg3	pH	flg1	flg2	flg3	R1	flg1	flg2	flg3	R2	flg1	flg2	flg3	Amount of sample	flg1	flg2	flg3	Amount of precipitation	Method Code	flg1	flg2	flg3
	Start		End																										
	Date	Time	Date	Time	mS/m																g				mm				
25	25/11/2012	9:00	26/11/2012	9:00																									
26	26/11/2012	9:00	27/11/2012	9:00																									
27	27/11/2012	9:00	28/11/2012	9:00																									
28	28/11/2012	9:00	29/11/2012	9:00																									
29	29/11/2012	9:00	30/11/2012	9:00																									
30	30/11/2012	9:00	01/12/2012	9:00																									

Summary I

Site name : Chainart agrometeorological station, Chainart

Total														
Mean	10.15	9.91	26.18	9.35	1.61	2.74	0.70	0.26	0.51	2.11	1.32	0.00	14.01	4.04
Max.	15.85	15.53	42.11	14.42	4.86	5.11	0.92	0.50	0.89	5.22	3.16	0.00	22.52	5.29
Min.	7.36	7.13	17.34	5.47	0.07	0.94	0.47	0.09	0.22	0.20	0.11	0.00	8.29	2.95

Sample No.	SO_4^{2-} umol/l	nss-SO_4^{2-} umol/l	NO_3^- umol/l	Cl^- umol/l	$HCOO^-$ umol/l	CH_3COO^- umol/l	$C_3H_5O(COO)_3^{3-}$ umol/l	$C_4H_4O_6^{2-}$ umol/l	$C_4H_4O_5^{2-}$ umol/l	$C_4H_4O_4^{2-}$ umol/l	$C_3H_5O_3^-$ umol/l	PO_4^{3-} umol/l	NH_4^+ umol/l	Na^+ umol/l
1														
2														
3														
4														
5														
6														
7														
8														
9														
10														
11	7.36	7.13	17.34	5.47	0.07	0.94	0.47	0.09	0.22	0.20	0.11	0.00	11.48	3.80
12														
13														
14														
15														
16														
17	10.81	10.58	19.19	14.42	0.29	4.85	0.58	0.50	0.24	3.55	3.16	0.00	11.95	3.82
18														
19														
20	7.54	7.36	23.36	13.38	0.55	2.18	0.88	0.19	0.63	0.97	1.09	0.00	8.29	2.95
21														
22														
23														
24	15.85	15.53	42.11	10.09	4.86	5.11	0.92	0.50	0.89	5.22	2.69	0.00	22.52	5.29

Summary I

Site name : Chainart agrometeorological station, Chainart

Total														
Mean	10.15	9.91	26.18	9.35	1.61	2.74	0.70	0.26	0.51	2.11	1.32	0.00	14.01	4.04
Max.	15.85	15.53	42.11	14.42	4.86	5.11	0.92	0.50	0.89	5.22	3.16	0.00	22.52	5.29
Min.	7.36	7.13	17.34	5.47	0.07	0.94	0.47	0.09	0.22	0.20	0.11	0.00	8.29	2.95

Sample No.	SO_4^{2-} umol/l	nss-SO_4^{2-} umol/l	NO_3^- umol/l	Cl^- umol/l	$HCOO^-$ umol/l	CH_3COO^- umol/l	$C_3H_5O(COO)_3^{3-}$ umol/l	$C_4H_4O_6^{2-}$ umol/l	$C_4H_4O_5^{2-}$ umol/l	$C_4H_4O_4^{2-}$ umol/l	$C_3H_5O_3^-$ umol/l	PO_4^{3-} umol/l	NH_4^+ umol/l	Na^+ umol/l
25														
26														
27														
28														
29														
30														

Summary 1 (Cont.)

Site name : Chainart agrometeorological station, Chainart

Total							
Mean	11.55	36.89	36.80	4.00	0.51	6.29	1.53
Max.	16.63	51.89	51.81	6.19	1.38	7.18	1.71
Min.	6.87	21.64	21.55	3.27	0.07	5.86	1.34

Sample No.	K^+ umol/l	Ca^{2+} umol/l	nss-Ca^{2+} umol/l	Mg^{2+} umol/l	H^+ umol/l	pH	EC mS/m
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11	16.63	51.89	51.81	3.27	0.07	7.18	1.53
12							
13							
14							
15							
16							
17	10.22	21.64	21.55	3.83	0.30	6.52	1.38
18							
19							
20	6.87	29.59	29.52	6.19	0.25	6.61	1.34
21							
22							
23							
24	8.75	26.28	26.17	3.28	1.38	5.86	1.71

Summary 1 (Cont.)

Site name : Chainart agrometeorological station, Chainart

Total							
Mean	11.55	36.89	36.80	4.00	0.51	6.29	1.53
Max.	16.63	51.89	51.81	6.19	1.38	7.18	1.71
Min.	6.87	21.64	21.55	3.27	0.07	5.86	1.34

Sample No.	K^+ umol/l	Ca^{2+} umol/l	nss-Ca^{2+} umol/l	Mg^{2+} umol/l	H^+ umol/l	pH	EC mS/m
25							
26							
27							
28							
29							
30							

Summary 2

Site name : Chainart agrometeorological station, Chainart

Total	276.12	711.99	254.30	43.69	74.61	19.17	7.16	13.98	57.27	35.97	0.00	1494.26	381.10	109.92	314.03
Mean											--	--	--	--	--
Max.	126.76	336.87	85.65	38.90	40.87	7.38	4.03	7.12	41.78	21.52	0.00	705.97	180.18	42.31	179.65
Min.	21.61	38.38	28.84	0.57	9.71	1.16	0.93	0.48	2.20	1.14	0.00	115.18	23.90	7.65	20.44

Sample No.	SO_4^{2-} umol/m^2	NO_3^- umol/m^2	Cl^- umol/m^2	$HCOO^-$ umol/m^2	CH_3COO^- umol/m^2	$C_3H_5O(COO)_3^{3-}$ umol/m^2	$C_4H_4O_6^{2-}$ umol/m^2	$C_4H_4O_5^{2-}$ umol/m^2	$C_4H_4O_4^{2-}$ umol/m^2	$C_3H_5O_3^-$ umol/m^2	PO_4^{3-} umol/m^2	Anion umol/m^2	NH_4^+ umol/m^2	Na^+ umol/m^2	K^+ umol/m^2
1															
2															
3															
4															
5															
6															
7															
8															
9															
10															
11	79.51	187.25	59.07	0.72	10.11	5.03	0.93	2.38	2.20	1.14	0.00	348.33	123.98	41.06	179.65
12															
13															
14															
15															
16															
17	21.61	38.38	28.84	0.57	9.71	1.16	1.00	0.48	7.10	6.33	0.00	115.18	23.90	7.65	20.44
18															
19															
20	48.24	149.49	85.65	3.50	13.94	5.60	1.20	4.00	6.18	6.98	0.00	324.78	53.04	18.90	43.97
21															
22															
23															
24	126.76	336.87	80.74	38.90	40.87	7.38	4.03	7.12	41.78	21.52	0.00	705.97	180.18	42.31	69.97

Summary 2

Site name : Chainart agrometeorological station, Chainart

Total	276.12	711.99	254.30	43.69	74.61	19.17	7.16	13.98	57.27	35.97	0.00	1494.26	381.10	109.92	314.03
Mean											--	--	--	--	--
Max.	126.76	336.87	85.65	38.90	40.87	7.38	4.03	7.12	41.78	21.52	0.00	705.97	180.18	42.31	179.65
Min.	21.61	38.38	28.84	0.57	9.71	1.16	0.93	0.48	2.20	1.14	0.00	115.18	23.90	7.65	20.44

Sample No.	SO_4^{2-} umol/m^2	NO_3^- umol/m^2	Cl^- umol/m^2	$HCOO^-$ umol/m^2	CH_3COO^- umol/m^2	$C_3H_5O(COO)_3^{3-}$ umol/m^2	$C_4H_4O_6^{2-}$ umol/m^2	$C_4H_4O_5^{2-}$ umol/m^2	$C_4H_4O_4^{2-}$ umol/m^2	$C_3H_5O_3^-$ umol/m^2	PO_4^{3-} umol/m^2	Anion umol/m^2	NH_4^+ umol/m^2	Na^+ umol/m^2	K^+ umol/m^2
25															
26															
27															
28															
29															
30															

Summary 2 (Cont.)

Site name : Chainart agrometeorological station, Chainart

Total	1003.34	108.85	13.93	1931.18	3425.44	269.49	1000.97	41.60
Mean	--	--	--	--	--	--	--	--
Max.	560.43	39.65	11.04	941.11	1289.44	124.21	559.54	16.55
Min.	43.27	7.67	0.60	103.53	218.71	21.15	43.11	2.76

Sample No.	Ca^{2+} µmol/m^2	Mg^{2+} µmol/m^2	H^+ µmol/m^2	Cation µmol/m^2	C+A µmol/m^2	nss-SO_4^{2-} µmol/m^2	nss-Ca^{2+} µmol/m^2	EC x ppt. mS/m*mm
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11	560.43	35.27	0.71	941.11	1289.44	77.04	559.54	16.55
12								
13								
14								
15								
16								
17	43.27	7.67	0.60	103.53	218.71	21.15	43.11	2.76
18								
19								
20	189.37	39.65	1.57	346.49	671.27	47.10	188.96	8.60
21								
22								
23								
24	210.28	26.26	11.04	540.05	1246.02	124.21	209.37	13.70

Summary 2 (Cont.)

Site name : Chainart agrometeorological station, Chainart

Total	1003.34	108.85	13.93	1931.18	3425.44	269.49	1000.97	41.60
Mean	--	--	--	--	--	--	--	--
Max.	560.43	39.65	11.04	941.11	1289.44	124.21	559.54	16.55
Min.	43.27	7.67	0.60	103.53	218.71	21.15	43.11	2.76

Sample No.	Ca^{2+} $\mu mol/m^2$	Mg^{2+} $\mu mol/m^2$	H^+ $\mu mol/m^2$	Cation $\mu mol/m^2$	C+A $\mu mol/m^2$	nss-SO_4^{2-} $\mu mol/m^2$	nss-Ca^{2+} $\mu mol/m^2$	EC x ppt. mS/m*mm
25								
26								
27								
28								
29								
30								

Summary 3

Site name : Chainart agrometeorological station, Chainart

Total	--	--	--	--	--	--	--						--	--	--	--	--	--	--
Mean	20.30	26.18	9.35	1.61	2.74	0.00	--	2.11	0.53	1.03	2.11	1.32	--	14.01	4.04	11.55	73.78	8.00	0.51
Max.	31.69	42.11	14.42	4.86	5.11	0.00	--	2.77	1.01	1.78	5.22	3.16	124.69	22.52	5.29	16.63	103.78	12.39	1.38
Min.	14.72	17.34	5.47	0.07	0.94	0.00	--	1.40	0.17	0.44	0.20	0.11	83.41	8.29	2.95	6.87	43.27	6.53	0.07

Sample No.	SO_4^{2-} ueq/l	NO_3^- ueq/l	Cl^- ueq/l	$HCOO^-$ ueq/l	CH_3COO^- ueq/l	PO_4^{3-} ueq/l	HCO_3^- ueq/l	$C_3H_5O(COO)_3^{3-}$ ueq/l	$C_4H_4O_6^{2-}$ ueq/l	$C_4H_4O_5^{2-}$ ueq/l	$C_4H_4O_4^{2-}$ ueq/l	$C_3H_5O_3^-$ ueq/l	Anion ueq/l	NH_4^+ ueq/l	Na^+ ueq/l	K^+ ueq/l	Ca^{2+} ueq/l	Mg^{2+} ueq/l	H^+ ueq/l
1																			
2																			
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			
11	14.72	17.34	5.47	0.07	0.94	0.00	83.83	1.40	0.17	0.44	0.20	0.11	124.69	11.48	3.80	16.63	103.78	6.53	0.07
12																			
13																			
14																			
15																			
16																			
17	21.61	19.19	14.42	0.29	4.85	0.00	18.34	1.74	1.00	0.48	3.55	3.16	88.64	11.95	3.82	10.22	43.27	7.67	0.30
18																			
19																			
20	15.07	23.36	13.38	0.55	2.18	0.00	22.56	2.63	0.38	1.25	0.97	1.09	83.41	8.29	2.95	6.87	59.18	12.39	0.25
21																			
22																			
23																			
24	31.69	42.11	10.09	4.86	5.11	0.00		2.77	1.01	1.78	5.22	2.69	107.33	22.52	5.29	8.75	52.57	6.57	1.38

Summary 3

Site name : Chainart agrometeorological station, Chainart

Total	--	--	--	--	--	--	--						--	--	--	--	--	--	--
Mean	20.30	26.18	9.35	1.61	2.74	0.00	--	2.11	0.53	1.03	2.11	1.32	--	14.01	4.04	11.55	73.78	8.00	0.51
Max.	31.69	42.11	14.42	4.86	5.11	0.00	--	2.77	1.01	1.78	5.22	3.16	124.69	22.52	5.29	16.63	103.78	12.39	1.38
Min.	14.72	17.34	5.47	0.07	0.94	0.00	--	1.40	0.17	0.44	0.20	0.11	83.41	8.29	2.95	6.87	43.27	6.53	0.07

Sample No.	SO_4^{2-} ueq/l	NO_3^- ueq/l	Cl^- ueq/l	$HCOO^-$ ueq/l	CH_3COO^- ueq/l	PO_4^{3-} ueq/l	HCO_3^- ueq/l	$C_3H_5O(COO)_3^{3-}$ ueq/l	$C_4H_4O_6^{2-}$ ueq/l	$C_4H_4O_5^{2-}$ ueq/l	$C_4H_4O_4^{2-}$ ueq/l	$C_3H_5O_3^-$ ueq/l	Anion ueq/l	NH_4^+ ueq/l	Na^+ ueq/l	K^+ ueq/l	Ca^{2+} ueq/l	Mg^{2+} ueq/l	H^+ ueq/l
25																			
26																			
27																			
28																			
29																			
30																			

Summary 3 (Cont.)

Site name : Chainart agrometeorological station, Chainart

Total	--	--	--	--	--	--	--	--	33.49	27.20	123.14	
Mean	--	--	--	--	--	1.53	--	--	--	--	--	--
Max.	142.30	266.98	--	6.60	#REF!	1.71	--	#REF!	13.800183	10.80	155.81	
Min.	77.24	165.88	--	-6.87	#REF!	1.34	--	#REF!	3.12	2.00	112.44	

Sample No.	Cation ueq/l	C+A ueq/l	Req.R1	R1	ECcal mS/m	ECmeas mS/m	Req.R2	R2	Amount of ppt.(cal) M mm	Amount of ppt. R mm	% CE (M/R) %	Sampling period day(s)
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11	142.30	266.98	8.00	6.60	1.93	1.53	13	11.55	13.80	10.80	127.78	1
12												
13												
14												
15												
16												
17	77.24	165.88	8.00	-6.87	1.15	1.38	13	-8.97	3.12	2.00	155.81	1
18												
19												
20	89.92	173.33	8.00	3.76	1.20	1.34	13	-5.83	7.58	6.40	118.49	1
21												
22												
23												
24	97.07	204.40	8.00	-5.02	1.41	1.71	13	-9.70	9.00	8.00	112.44	1

Summary 3 (Cont.)

Site name : Chainart agrometeorological station, Chainart

Total	--	--	--	--	--	--	--	--	33.49	27.20	123.14	
Mean	--	--	--	--	--	1.53	--	--	--	--	--	--
Max.	142.30	266.98	--	6.60	#REF!	1.71	--	#REF!	13.800183	10.80	155.81	
Min.	77.24	165.88	--	-6.87	#REF!	1.34	--	#REF!	3.12	2.00	112.44	

Sample No.	Cation ueq/l	C+A ueq/l	Req.R1	R1	ECcal mS/m	ECmeas mS/m	Req.R2	R2	Amount of ppt.(cal) M mm	Amount of ppt. R mm	% CE (M/R) %	Sampling period day(s)
25												
26												
27												
28												
29												
30												

Form (Wet A) No.1 Results of wet deposition analysis (Anion)

Site name : Chainart agrometeorological station, Chainart

Funnel diameter : 288 (mm)

Name of Laboratory : King Mongkut's University of Technology Thonburi

Sample No.	Sampling period				SO_4^{2-}	flg1	flg2	flg3	NO_3^-	flg1	flg2	flg3	Cl^-	flg1	flg2	flg3	$HCOO^-$	flg1	flg2	flg3	CH_3COO^-	flg1	flg2	flg3	PO_4^{3-}	flg1	flg2	flg3
	Start		End																									
	Date	Time	Date	Time	umol/l				umol/l				umol/l				umol/l				umol/l				umol/l			
1	01/01/2013	9:00	02/01/2013	9:00																								
2	02/01/2013	9:00	03/01/2013	9:00																								
3	03/01/2013	9:00	04/01/2013	9:00																								
4	04/01/2013	9:00	05/01/2013	9:00																								
5	05/01/2013	9:00	06/01/2013	9:00																								
6	06/01/2013	9:00	07/01/2013	9:00																								
7	07/01/2013	9:00	08/01/2013	9:00																								
8	08/01/2013	9:00	09/01/2013	9:00																								
9	09/01/2013	9:00	10/01/2013	9:00																								
10	10/01/2013	9:00	11/01/2013	9:00																								
11	11/01/2013	9:00	12/01/2013	9:00																								
12	12/01/2013	9:00	13/01/2013	9:00																								
13	13/01/2013	9:00	14/01/2013	9:00																								
14	14/01/2013	9:00	15/01/2013	9:00																								
15	15/01/2013	9:00	16/01/2013	9:00																								
16	16/01/2013	9:00	17/01/2013	9:00																								
17	17/01/2013	9:00	18/01/2013	9:00																								
18	18/01/2013	9:00	19/01/2013	9:00																								
19	19/01/2013	9:00	20/01/2013	9:00																								
20	20/01/2013	9:00	21/01/2013	9:00																								
21	21/01/2013	9:00	22/01/2013	9:00																								
22	22/01/2013	9:00	23/01/2013	9:00																								
23	23/01/2013	9:00	24/01/2013	9:00																								
24	24/01/2013	9:00	25/01/2013	9:00																								

Form (Wet A) No.1 Results of wet deposition analysis (Anion)

Site name : Chainart agrometeorological station, Chainart

Funnel diameter : 288 (mm)

Name of Laboratory : King Mongkut's University of Technology Thonburi

Sample No.	Sampling period				SO_4^{2-}	flg1	flg2	flg3	NO_3^-	flg1	flg2	flg3	Cl^-	flg1	flg2	flg3	$HCOO^-$	flg1	flg2	flg3	CH_3COO^-	flg1	flg2	flg3	PO_4^{3-}	flg1	flg2	flg3
	Start		End																									
	Date	Time	Date	Time	umol/l				umol/l				umol/l				umol/l				umol/l				umol/l			
25	25/01/2013	9:00	26/01/2013	9:00	40.79				93.93				47.05				51.42				71.22				0.00			
26	26/01/2013	9:00	27/01/2013	9:00																								
27	27/01/2013	9:00	28/01/2013	9:00																								
28	28/01/2013	9:00	29/01/2013	9:00																								
29	29/01/2013	9:00	30/01/2013	9:00																								
30	30/01/2013	9:00	31/01/2013	9:00																								
31	31/01/2013	9:00	01/02/2013	9:00	7.94				33.37				11.39				15.21				4.53				0.00			

Form (Wet A) No.1 (Cont.) **Results of wet deposition analysis (Anion)**

Sample No.	$C_3H_5O(COO)_3^{3-}$ umol/l	flg1	flg2	flg3	$C_4H_4O_6^{2-}$ umol/l	flg1	flg2	flg3	$C_4H_4O_5^{2-}$ umol/l	flg1	flg2	flg3	$C_4H_4O_4^{2-}$ umol/l	flg1	flg2	flg3	$C_3H_5O_3^{-}$ umol/l
1																	
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	
11																	
12																	
13																	
14																	
15																	
16																	
17																	
18																	
19																	
20																	
21																	
22																	
23																	
24																	

Sample No.	$C_3H_5O(COO)_3^{3-}$ umol/l	flg1	flg2	flg3	$C_4H_4O_6^{2-}$ umol/l	flg1	flg2	flg3	$C_4H_4O_5^{2-}$ umol/l	flg1	flg2	flg3	$C_4H_4O_4^{2-}$ umol/l	flg1	flg2	flg3	$C_3H_5O_3^{-}$ umol/l
25	13.64				47.39				3.41				9.37				18.87
26																	
27																	
28																	
29																	
30																	
31	0.59				0.22				0.74				1.81				3.23

Form (Wet A) No.2 Results of wet deposition analysis (Cation)

Site name : Chainart agrometeorological station, Chainart

Funnel diameter : 288 (mm)

Name of Laboratory : King Mongkut's University of Technology Thonburi

Sample No.	Sampling period				NH_4^+	flg1	flg2	flg3	Na^+	flg1	flg2	flg3	K^+	flg1	flg2	flg3	Ca^{2+}	flg1	flg2	flg3	Mg^{2+}	flg1	flg2	flg3		flg1	flg2	flg3
	Start		End																									
	Date	Time	Date	Time	umol/l				umol/l				umol/l				umol/l				umol/l							
1	01/01/2013	9:00	02/01/2013	9:00																								
2	02/01/2013	9:00	03/01/2013	9:00																								
3	03/01/2013	9:00	04/01/2013	9:00																								
4	04/01/2013	9:00	05/01/2013	9:00																								
5	05/01/2013	9:00	06/01/2013	9:00																								
6	06/01/2013	9:00	07/01/2013	9:00																								
7	07/01/2013	9:00	08/01/2013	9:00																								
8	08/01/2013	9:00	09/01/2013	9:00																								
9	09/01/2013	9:00	10/01/2013	9:00																								
10	10/01/2013	9:00	11/01/2013	9:00																								
11	11/01/2013	9:00	12/01/2013	9:00																								
12	12/01/2013	9:00	13/01/2013	9:00																								
13	13/01/2013	9:00	14/01/2013	9:00																								
14	14/01/2013	9:00	15/01/2013	9:00																								
15	15/01/2013	9:00	16/01/2013	9:00																								
16	16/01/2013	9:00	17/01/2013	9:00																								
17	17/01/2013	9:00	18/01/2013	9:00																								
18	18/01/2013	9:00	19/01/2013	9:00																								
19	19/01/2013	9:00	20/01/2013	9:00																								
20	20/01/2013	9:00	21/01/2013	9:00																								
21	21/01/2013	9:00	22/01/2013	9:00																								
22	22/01/2013	9:00	23/01/2013	9:00																								
23	23/01/2013	9:00	24/01/2013	9:00																								
24	24/01/2013	9:00	25/01/2013	9:00																								

Form (Wet A) No.2 Results of wet deposition analysis (Cation)

Site name : Chainart agrometeorological station, Chainart

Funnel diameter : 288 (mm)

Name of Laboratory : King Mongkut's University of Technology Thonburi

Sample No.	Sampling period				NH_4^+	flg1	flg2	flg3	Na^+	flg1	flg2	flg3	K^+	flg1	flg2	flg3	Ca^{2+}	flg1	flg2	flg3	Mg^{2+}	flg1	flg2	flg3		flg1	flg2	flg3
	Start		End																									
	Date	Time	Date	Time	umol/l				umol/l				umol/l				umol/l				umol/l							
25	25/01/2013	9:00	26/01/2013	9:00	32.47				19.45				12.43				57.24				4.95							
26	26/01/2013	9:00	27/01/2013	9:00																								
27	27/01/2013	9:00	28/01/2013	9:00																								
28	28/01/2013	9:00	29/01/2013	9:00																								
29	29/01/2013	9:00	30/01/2013	9:00																								
30	30/01/2013	9:00	31/01/2013	9:00																								
31	31/01/2013	9:00	01/02/2013	9:00	10.50				2.84				9.10				27.43				3.91							

Form (Wet A) No.3 Results of wet deposition analysis(EC, pH, R1 ,R2, Precipitation)

Site name : Chainart agrometeorological station, Chainart

Funnel diameter : 288 (mm)

Name of Laboratory : King Mongkut's University of Technology Thonburi

Method Code 1: Rain Gauge 2: Calculation by sample amount 3: others

Sample No.	Sampling period				EC	flg1	flg2	flg3	pH	flg1	flg2	flg3	R1	flg1	flg2	flg3	R2	flg1	flg2	flg3	Amount of sample	flg1	flg2	flg3	Amount of precipitation	Method Code	flg1	flg2	flg3
	Start		End																										
	Date	Time	Date	Time	mS/m																g				mm				
1	01/01/2013	9:00	02/01/2013	9:00																									
2	02/01/2013	9:00	03/01/2013	9:00																									
3	03/01/2013	9:00	04/01/2013	9:00																									
4	04/01/2013	9:00	05/01/2013	9:00																									
5	05/01/2013	9:00	06/01/2013	9:00																									
6	06/01/2013	9:00	07/01/2013	9:00																									
7	07/01/2013	9:00	08/01/2013	9:00																									
8	08/01/2013	9:00	09/01/2013	9:00																									
9	09/01/2013	9:00	10/01/2013	9:00																									
10	10/01/2013	9:00	11/01/2013	9:00																									
11	11/01/2013	9:00	12/01/2013	9:00																									
12	12/01/2013	9:00	13/01/2013	9:00																									
13	13/01/2013	9:00	14/01/2013	9:00																									
14	14/01/2013	9:00	15/01/2013	9:00																									
15	15/01/2013	9:00	16/01/2013	9:00																									
16	16/01/2013	9:00	17/01/2013	9:00																									
17	17/01/2013	9:00	18/01/2013	9:00																									
18	18/01/2013	9:00	19/01/2013	9:00																									
19	19/01/2013	9:00	20/01/2013	9:00																									
20	20/01/2013	9:00	21/01/2013	9:00																									
21	21/01/2013	9:00	22/01/2013	9:00																									
22	22/01/2013	9:00	23/01/2013	9:00																									
23	23/01/2013	9:00	24/01/2013	9:00																									
24	24/01/2013	9:00	25/01/2013	9:00																									

Form (Wet A) No.3 Results of wet deposition analysis(EC, pH, R1 ,R2, Precipitation)

Site name : Chainart agrometeorological station, Chainart

Funnel diameter : 288 (mm)

Name of Laboratory : King Mongkut's University of Technology Thonburi

Method Code 1: Rain Gauge 2: Calculation by sample amount 3: others

Sample No.	Sampling period				EC	flg1	flg2	flg3	pH	flg1	flg2	flg3	R1	flg1	flg2	flg3	R2	flg1	flg2	flg3	Amount of sample	flg1	flg2	flg3	Amount of precipitation	Method Code	flg1	flg2	flg3
	Start		End																										
	Date	Time	Date	Time	mS/m																g				mm				
25	25/01/2013	9:00	26/01/2013	9:00	4.15				5.79				-46.098				4.01643				125.00				1.30				
26	26/01/2013	9:00	27/01/2013	9:00																									
27	27/01/2013	9:00	28/01/2013	9:00																									
28	28/01/2013	9:00	29/01/2013	9:00																									
29	29/01/2013	9:00	30/01/2013	9:00																									
30	30/01/2013	9:00	31/01/2013	9:00																									
31	31/01/2013	9:00	01/02/2013	9:00	1.40				5.68												998.00				13.90				

Summary 1

Site name : Chainart agrometeorological station, Chainart

Total														
Mean	10.75	10.50	38.55	14.44	18.31	10.24	1.71	4.26	0.97	2.46	4.57	0.00	12.38	4.26
Max.	40.79	39.62	93.93	47.05	51.42	71.22	13.64	47.39	3.41	9.37	18.87	0.00	32.47	19.45
Min.	7.94	7.77	33.37	11.39	15.21	4.53	0.59	0.22	0.74	1.81	3.23	0.00	10.50	2.84

Sample No.	SO_4^{2-} umol/l	nss-SO_4^{2-} umol/l	NO_3^- umol/l	Cl^- umol/l	$HCOO^-$ umol/l	CH_3COO^- umol/l	$C_3H_5O(COO)_3^{3-}$ umol/l	$C_4H_4O_6^{2-}$ umol/l	$C_4H_4O_5^{2-}$ umol/l	$C_4H_4O_4^{2-}$ umol/l	$C_3H_5O_3^-$ umol/l	PO_4^{3-} umol/l	NH_4^+ umol/l	Na^+ umol/l
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Summary 1

Site name : Chainart agrometeorological station, Chainart

Total														
Mean	10.75	10.50	38.55	14.44	18.31	10.24	1.71	4.26	0.97	2.46	4.57	0.00	12.38	4.26
Max.	40.79	39.62	93.93	47.05	51.42	71.22	13.64	47.39	3.41	9.37	18.87	0.00	32.47	19.45
Min.	7.94	7.77	33.37	11.39	15.21	4.53	0.59	0.22	0.74	1.81	3.23	0.00	10.50	2.84

Sample No.	SO_4^{2-} umol/l	nss-SO_4^{2-} umol/l	NO_3^- umol/l	Cl^- umol/l	$HCOO^-$ umol/l	CH_3COO^- umol/l	$C_3H_5O(COO)_3^{3-}$ umol/l	$C_4H_4O_6^{2-}$ umol/l	$C_4H_4O_5^{2-}$ umol/l	$C_4H_4O_4^{2-}$ umol/l	$C_3H_5O_3^-$ umol/l	PO_4^{3-} umol/l	NH_4^+ umol/l	Na^+ umol/l
25	40.79	39.62	93.93	47.05	51.42	71.22	13.64	47.39	3.41	9.37	18.87	0.00	32.47	19.45
26														
27														
28														
29														
30														
31	7.94	7.77	33.37	11.39	15.21	4.53	0.59	0.22	0.74	1.81	3.23	0.00	10.50	2.84

Summary 1 (Cont.)

Site name : Chainart agrometeorological station, Chainart

Total							
Mean	9.39	29.98	29.89	4.00	2.05	5.69	1.64
Max.	12.43	57.24	56.82	4.95	2.09	5.79	4.15
Min.	9.10	27.43	27.37	3.91	1.62	5.68	1.40

Sample No.	K^+ umol/l	Ca^{2+} umol/l	nss-Ca^{2+} umol/l	Mg^{2+} umol/l	H^+ umol/l	pH	EC mS/m
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Summary 1 (Cont.)

Site name : Chainart agrometeorological station, Chainart

Total							
Mean	9.39	29.98	29.89	4.00	2.05	5.69	1.64
Max.	12.43	57.24	56.82	4.95	2.09	5.79	4.15
Min.	9.10	27.43	27.37	3.91	1.62	5.68	1.40

Sample No.	K^+ umol/l	Ca^{2+} umol/l	nss-Ca^{2+} umol/l	Mg^{2+} umol/l	H^+ umol/l	pH	EC mS/m
25	12.43	57.24	56.82	4.95	1.62	5.79	4.15
26							
27							
28							
29							
30							
31	9.10	27.43	27.37	3.91	2.09	5.68	1.40

Summary 2

Site name : Chainart agrometeorological station, Chainart

Total	163.44	585.95	219.41	278.31	155.59	25.98	64.72	14.75	37.34	69.43	0.00	1614.92	188.22	64.77	142.72
Mean											--	--	--	--	--
Max.	110.41	463.85	158.25	211.47	92.58	17.73	61.60	10.31	25.16	44.90	0.00	1098.72	146.01	39.48	126.56
Min.	53.03	122.10	61.16	66.85	63.01	8.25	3.12	4.44	12.18	24.53	0.00	516.21	42.21	25.29	16.16

Sample No.	SO_4^{2-}	NO_3^-	Cl^-	$HCOO^-$	CH_3COO^-	$C_3H_5O(COO)_3^{3-}$	$C_4H_4O_6^{2-}$	$C_4H_4O_5^{2-}$	$C_4H_4O_4^{2-}$	$C_3H_5O_3^-$	PO_4^{3-}	Anion	NH_4^+	Na^+	K^+
	umol/m^2	umol/m^2	umol/m^2	umol/m^2	umol/m^2	umol/m^2	umol/m^2	umol/m^2	umol/m^2	umol/m^2	umol/m^2	umol/m^2	umol/m^2	umol/m^2	umol/m^2
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Summary 2

Site name : Chainart agrometeorological station, Chainart

Total	163.44	585.95	219.41	278.31	155.59	25.98	64.72	14.75	37.34	69.43	0.00	1614.92	188.22	64.77	142.72
Mean											--	--	--	--	--
Max.	110.41	463.85	158.25	211.47	92.58	17.73	61.60	10.31	25.16	44.90	0.00	1098.72	146.01	39.48	126.56
Min.	53.03	122.10	61.16	66.85	63.01	8.25	3.12	4.44	12.18	24.53	0.00	516.21	42.21	25.29	16.16

Sample No.	SO_4^{2-} umol/m^2	NO_3^- umol/m^2	Cl^- umol/m^2	$HCOO^-$ umol/m^2	CH_3COO^- umol/m^2	$C_3H_5O(COO)_3^{3-}$ umol/m^2	$C_4H_4O_6^{2-}$ umol/m^2	$C_4H_4O_5^{2-}$ umol/m^2	$C_4H_4O_4^{2-}$ umol/m^2	$C_3H_5O_3^-$ umol/m^2	PO_4^{3-} umol/m^2	Anion umol/m^2	NH_4^+ umol/m^2	Na^+ umol/m^2	K^+ umol/m^2
25	53.03	122.10	61.16	66.85	92.58	17.73	61.60	4.44	12.18	24.53	0.00	516.21	42.21	25.29	16.16
26															
27															
28															
29															
30															
31	110.41	463.85	158.25	211.47	63.01	8.25	3.12	10.31	25.16	44.90	0.00	1098.72	146.01	39.48	126.56

Summary 2 (Cont.)

Site name : Chainart agrometeorological station, Chainart

Total	455.69	60.81	31.15	943.36	2558.28	159.53	454.29	24.88
Mean	--	--	--	--	--	--	--	--
Max.	381.28	54.38	29.04	776.75	1875.46	108.03	380.43	19.49
Min.	74.41	6.44	2.11	166.61	682.82	51.50	73.87	5.40

Sample No.	Ca^{2+} $umol/m^2$	Mg^{2+} $umol/m^2$	H^+ $umol/m^2$	Cation $umol/m^2$	C+A $umol/m^2$	nss-SO_4^{2-} $umol/m^2$	nss-Ca^{2+} $umol/m^2$	EC x ppt. mS/m*mm
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Summary 2 (Cont.)

Site name : Chainart agrometeorological station, Chainart

Total	455.69	60.81	31.15	943.36	2558.28	159.53	454.29	24.88
Mean	--	--	--	--	--	--	--	--
Max.	381.28	54.38	29.04	776.75	1875.46	108.03	380.43	19.49
Min.	74.41	6.44	2.11	166.61	682.82	51.50	73.87	5.40

Sample No.	Ca^{2+} $umol/m^2$	Mg^{2+} $umol/m^2$	H^+ $umol/m^2$	Cation $umol/m^2$	C+A $umol/m^2$	nss-SO_4^{2-} $umol/m^2$	nss-Ca^{2+} $umol/m^2$	EC x ppt. mS/m*mm
25	74.41	6.44	2.11	166.61	682.82	51.50	73.87	5.40
26								
27								
28								
29								
30								
31	381.28	54.38	29.04	776.75	1875.46	108.03	380.43	19.49

Summary 3

Site name : Chainart agrometeorological station, Chainart

Total	--	--	--	--	--	--	--						--	--	--	--	--	--	--
Mean	21.50	38.55	14.44	18.31	10.24	0.00	--	5.13	8.52	1.94	2.46	4.57	--	12.38	4.26	9.39	59.96	8.00	2.05
Max.	81.58	93.93	47.05	51.42	71.22	0.00	--	40.91	94.77	6.83	9.37	18.87	515.95	32.47	19.45	12.43	114.48	9.91	2.09
Min.	15.89	33.37	11.39	15.21	4.53	0.00	--	1.78	0.45	1.48	1.81	3.23	89.14	10.50	2.84	9.10	54.86	7.82	1.62

Sample No.	SO_4^{2-} ueq/l	NO_3^- ueq/l	Cl^- ueq/l	$HCOO^-$ ueq/l	CH_3COO^- ueq/l	PO_4^{3-} ueq/l	HCO_3^- ueq/l	$C_3H_5O(COO)_3^{3-}$ ueq/l	$C_4H_4O_6^{2-}$ ueq/l	$C_4H_4O_5^{2-}$ ueq/l	$C_4H_4O_4^{2-}$ ueq/l	$C_3H_5O_3^-$ ueq/l	Anion ueq/l	NH_4^+ ueq/l	Na^+ ueq/l	K^+ ueq/l	Ca^{2+} ueq/l	Mg^{2+} ueq/l	H^+ ueq/l
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Summary 3

Site name : Chainart agrometeorological station, Chainart

Total	--	--	--	--	--	--	--						--	--	--	--	--	--	--
Mean	21.50	38.55	14.44	18.31	10.24	0.00	--	5.13	8.52	1.94	2.46	4.57	--	12.38	4.26	9.39	59.96	8.00	2.05
Max.	81.58	93.93	47.05	51.42	71.22	0.00	--	40.91	94.77	6.83	9.37	18.87	515.95	32.47	19.45	12.43	114.48	9.91	2.09
Min.	15.89	33.37	11.39	15.21	4.53	0.00	--	1.78	0.45	1.48	1.81	3.23	89.14	10.50	2.84	9.10	54.86	7.82	1.62

Sample No.	SO_4^{2-}	NO_3^-	Cl^-	$HCOO^-$	CH_3COO^-	PO_4^{3-}	HCO_3^-	$C_3H_5O(COO)_3^{3-}$	$C_4H_4O_6^{2-}$	$C_4H_4O_5^{2-}$	$C_4H_4O_4^{2-}$	$C_3H_5O_3^-$	Anion	NH_4^+	Na^+	K^+	Ca^{2+}	Mg^{2+}	H^+
	ueq/l	ueq/l	ueq/l	ueq/l	ueq/l	ueq/l	ueq/l	ueq/l	ueq/l	ueq/l	ueq/l	ueq/l	ueq/l	ueq/l	ueq/l	ueq/l	ueq/l	ueq/l	ueq/l
25	81.58	93.93	47.05	51.42	71.22	0.00		40.91	94.77	6.83	9.37	18.87	515.95	32.47	19.45	12.43	114.48	9.91	1.62
26																			
27																			
28																			
29																			
30																			
31	15.89	33.37	11.39	15.21	4.53	0.00		1.78	0.45	1.48	1.81	3.23	89.14	10.50	2.84	9.10	54.86	7.82	2.09

Summary 3 (Cont.)

Site name : Chainart agrometeorological station, Chainart

Total	--	--	--	--	--	--	--	--	17.24	15.20	113.41	
Mean	--	--	--	--	--	1.64	--	--	--	--	--	--
Max.	190.36	706.31	--	-1.09	#REF!	4.15	--		15.319891	13.90	147.60	
Min.	87.22	176.36	--	-46.10	#REF!	1.40	--	#REF!	1.92	1.30	110.22	

Sample No.	Cation ueq/l	C+A ueq/l	Req.R1	R1	ECcal mS/m	ECmeas mS/m	Req.R2	R2	Amount of ppt.(cal) M mm	Amount of ppt. R mm	% CE (M/R) %	Sampling period day(s)
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Summary 3 (Cont.)

Site name : Chainart agrometeorological station, Chainart

Total	--	--	--	--	--	--	--	--	17.24	15.20	113.41	
Mean	--	--	--	--	--	1.64	--	--	--	--	--	--
Max.	190.36	706.31	--	-1.09	#REF!	4.15	--		15.319891	13.90	147.60	
Min.	87.22	176.36	--	-46.10	#REF!	1.40	--	#REF!	1.92	1.30	110.22	

Sample No.	Cation ueq/l	C+A ueq/l	Req.R1	R1	ECcal mS/m	ECmeas mS/m	Req.R2	R2	Amount of ppt.(cal) M mm	Amount of ppt. R mm	% CE (M/R) %	Sampling period day(s)
25	190.36	706.31	8.00	-46.10	4.50	4.15	9	4.02	1.92	1.30	147.60	1
26												
27												
28												
29												
30												
31	87.22	176.36	8.00	-1.09	1.20	1.40	13	-7.66	15.32	13.90	110.22	1

ภาคผนวก ค

ข้อมูลผลการวิเคราะห์ตัวอย่าง

Filter Packs

Unit nmol/m^3

Sample No.	Sampling period				Flow			Gas			
	Start		End		Aver.temp.	Air Vol.	Air Vol.	citrate	tartrate	malate	succinate
	Date	Time	Date	Time	(°C)	(m^3)	Correct.				
Sample 1	8/1/2012	7.00	8/11/2012	7.00	28.56	12.36	12.01	0.08	1.67	1.53	6.44
Sample 2	8/11/2012	7.00	8/21/2012	7.00	28.26	12.17	11.84	0.50	0.84	1.25	10.46
Sample 3	8/21/2012	7.00	9/1/2012	7.00	29.61	15.07	14.59	0.59	1.02	0.93	9.40
Sample 4	9/1/2012	7.00	9/11/2012	7.00	28.73	12.79	12.42	0.00	0.00	0.00	0.00
Sample 5	9/11/2012	7.00	9/21/2012	7.00	29.21	12.27	11.90	1.14	11.65	8.00	16.21
Sample 6	9/21/2012	7.00	10/1/2012	7.00	29.33	13.88	13.45	8.49	8.32	6.12	89.05
Sample7	10/1/2012	7.00	10/11/2012	7.00	29.02	12.06	11.89	5.85	4.37	3.75	21.52
Sample8	10/11/2012	7.00	10/21/2012	7.00	29.63	12.88	12.47	7.30	8.01	9.14	76.50
Sample9	10/21/2012	7.00	11/1/2012	7.00	29.39	14.12	13.68	7.24	2.80	2.68	35.00
Sample10	11/1/2012	7.00	11/11/2012	7.00	29.55	12.63	12.23	0.37	1.38	2.80	7.92
Sample11	11/11/2012	7.00	11/21/2012	7.00	29.26	13.62	13.20	2.76	2.51	6.42	23.23
Sample12	11/21/2012	7.00	12/1/2012	7.00	29.55	13.20	12.78	9.86	16.10	7.19	20.50
Sample13	12/1/2012	7.00	12/11/2012	7.00	29.76	12.40	12.00	10.67	1.49	1.22	52.28

Sample No.	Sampling period				Flow			Gas			
	Start		End		Aver.temp.	Air Vol.	Air Vol.	citrate	tartrate	malate	succinate
	Date	Time	Date	Time	(°C)	(m^3)	Correct.				
Sample14	12/11/2012	7.00	12/21/2012	7.00	28.63	11.66	11.32	10.63	3.63	12.38	50.85
Sample15	12/21/2012	7.00	1/1/2013	7.00	26.99	14.40	14.07	48.38	30.58	1.37	37.41
Sample16	1/1/2013	7.00	1/11/2013	7.00	26.51	12.71	12.44	26.23	8.06	43.73	24.10
Sample17	1/11/2013	7.00	1/21/2013	7.00	26.52	13.08	12.80	4.32	10.64	39.98	134.85
Sample18	1/21/2013	7.00	2/1/2013	7.00	27.85	15.24	14.84	0.92	13.25	9.18	20.16

Unit nmol/m^3

Sample No.	Gas			Particle						
	lactate	formate	acetate	citrate	tartrate	malate	succinate	lactate	formate	acetate
Sample 1	27.77	62.05	31.07	0.04	0.11	0.04	0.31	0.29	0.30	1.17
Sample 2	38.39	53.30	28.46	0.12	0.13	0.08	0.83	0.11	0.29	2.43
Sample 3	26.88	41.42	8.60	0.11	0.17	0.10	0.59	0.29	0.12	2.54
Sample 4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sample 5	71.51	221.74	110.17	1.18	0.39	0.85	4.25	3.03	0.56	7.00
Sample 6	186.71	520.08	264.35	0.58	0.24	0.23	1.69	1.10	0.43	4.69
Sample7	141.34	258.42	83.94	1.57	1.49	0.32	3.17	0.49	1.32	27.90
Sample8	269.69	329.59	105.07	0.21	0.13	1.04	0.63	0.66	0.39	7.22
Sample9	87.27	216.38	122.81	0.62	0.31	0.76	2.39	0.39	0.60	10.36
Sample10	23.63	60.26	39.92	0.17	0.05	0.48	0.08	0.47	0.01	3.08
Sample11	60.49	132.79	101.18	0.71	0.14	0.65	1.59	0.63	0.65	3.99
Sample12	89.26	217.41	345.33	0.60	0.76	2.07	4.07	0.96	0.86	17.09
Sample13	159.03	267.52	39.75	1.28	0.31	0.41	4.20	1.36	1.16	11.84

Unit nmol/m^3

Sample No.	Gas			Particle						
	lactate	formate	acetate	citrate	tartrate	malate	succinate	lactate	formate	acetate
Sample 1	27.77	62.05	31.07	0.04	0.11	0.04	0.31	0.29	0.30	1.17
Sample 2	38.39	53.30	28.46	0.12	0.13	0.08	0.83	0.11	0.29	2.43
Sample 3	26.88	41.42	8.60	0.11	0.17	0.10	0.59	0.29	0.12	2.54
Sample 4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sample 5	71.51	221.74	110.17	1.18	0.39	0.85	4.25	3.03	0.56	7.00
Sample 6	186.71	520.08	264.35	0.58	0.24	0.23	1.69	1.10	0.43	4.69
Sample7	141.34	258.42	83.94	1.57	1.49	0.32	3.17	0.49	1.32	27.90
Sample8	269.69	329.59	105.07	0.21	0.13	1.04	0.63	0.66	0.39	7.22
Sample9	87.27	216.38	122.81	0.62	0.31	0.76	2.39	0.39	0.60	10.36
Sample10	23.63	60.26	39.92	0.17	0.05	0.48	0.08	0.47	0.01	3.08
Sample11	60.49	132.79	101.18	0.71	0.14	0.65	1.59	0.63	0.65	3.99
Sample12	89.26	217.41	345.33	0.60	0.76	2.07	4.07	0.96	0.86	17.09
Sample13	159.03	267.52	39.75	1.28	0.31	0.41	4.20	1.36	1.16	11.84