

Table 24 Similarity and mol% G+C of DNA of *Hanseniaspora/Kloeckera* Group I and related strains.

Group I	Mol % G+C	% Similarity										
		1	2	3	4	5	6	7	8	9	10	11
1 ST-5	34.8	100										
2 ST-8	36.1	96.5	nd									
3 ST-9	35.4	95.8	nd	nd								
4 ST-448	35.3	97.8	nd	nd	nd							
5 ST-481	35.3	108.1	nd	nd	nd	nd						
6 <i>H. opuniae</i> CBS 8733	33.6-35.3	118.1	140.2	153.4	159.4	109.7	100					
7 <i>H. lachancei</i> CBS 8818	34.8-35.6	57.9	57.3	54.1	56.0	55.9	50.2	100				
8 <i>H. guiliermondii</i> BCC 4316	32.9-34.2	27.8	30.4	27.5	37.2	57.7	48.0	28.0	100			
9 <i>H. clermontiae</i> CBS 8821	35.7-37.2	25.4	28.9	22.0	27.3	39.3	35.5	25.9	33.7	100		
10 <i>H. meyeri</i> CBS 8734	36.6-37.4	19.6	24.3	20.1	28.4	31.2	39.2	20.2	30.3	58.0	100	
11 ST-398	34.9	55.0	nd	nd	nd	nd	74.2	47.7	51.4	43.9	9.8	ND

Remark: nd, not determined

Table 25 Number of nucleotide differences in D1/D2 domain among *Hanseniaspora/Kloeckera* Group I and type strains of related species.

Group I	ST-5	ST-8	ST-9	ST-448	ST-481	<i>H.opu.</i>	<i>H.gui.</i>	<i>H.mey.</i>	<i>H.lac.</i>	<i>H.cle.</i>	CBS 8772	ST-398	<i>H. uva.</i>
ST-5		1	1	1	1	1	3	4	4	5	5	5	6
ST-8	0.2		0	1	1	1	3	4	4	5	5	5	6
ST-9	0.2	0		1	1	1	3	4	4	5	5	4	6
ST-448	0.2	0.2	0.2		1	0	2	3	3	4	4	4	5
ST-481	0.2	0.2	0.2	0.2		1	3	4	4	5	5	5	6
<i>H. opuntiae</i>	0.2	0.2	0.2	0.2	0.2		2	3	3	4	4	4	5
<i>H. guilliermondii</i>	0.6	0.6	0.6	0.4	0.6	0.4		3	5	4	4	4	5
<i>H. meyeri</i>	0.8	0.8	0.8	0.6	0.7	0.6	0.6		6	1	5	5	4
<i>H. lachancei</i>	0.8	0.8	0.8	0.6	0.7	0.6	0.9	1.1		5	5	5	6
<i>H. clermontiae</i>	0.9	0.9	0.9	0.7	0.9	0.7	0.7	0.2	0.9		4	4	3
<i>Hanseniaspora</i> sp.CBS 8772	0.9	0.9	0.9	0.7	0.9	0.7	0.7	0.9	0.9	0.7		0	5
ST-398	1.1	1.1	1.0	0.8	0.9	0.8	0.8	0.9	0.9	0.7	0		5
<i>H. uvarum</i>	1.1	1.1	1.1	1.3	1.1	0.9	0.9	0.8	1.1	0.6	0.6	0.9	

Remark: A upper right triangle refers to nucleotide differences in D1/D2 including gaps and lower triangle refers to % nucleotide differences.

Table 26 Similarity and mol% G+C of DNA of *Hanseniaspora/Kloeckera* Group II and type strain of related species. Hybridization was performed at 40°C.

Group II	Strains	Mol% G+C	% Similarity						
			ST-250	ST-306	ST-464	ST-493	ST-613	ST-391	CBS 8734
Sub Group I	ST-250	34.9	100						
	ST-306	34.8	91.6	nd					
Sub Group II	ST-464	35.3	63.0	nd	nd				
	ST-493	35.2	67.4	nd	nd	nd			
	ST-613	34.9	72.5	nd	nd	nd	nd		
SubGroup III	ST-391	35.0	58.4	nd	nd	nd	nd	nd	
	<i>H. meyeri</i> CBS 8734	36.6-37.4	23.6	20.8	27.7	29.0	28.7	18.1	100

Remark: nd, not determined

Table 27 Number of nucleotide differences in D1/D2 domain among *Hanseniaspora/Kloeckera* Group II and related species.

Group II	Strains	ST-250	ST-306	ST-464	ST-493	ST-613	ST-391	G10p1	G4p4	G4p1	<i>H. mey.</i>	<i>H. uva.</i>
Subgroup I	ST-250		2(1)	1	1	1	4(2)	3(1)	5(4)	20(6)	20	22
	ST-306	0.2		1	1	1	3(1)	4(2)	6(5)	21(7)	21(1)	23(1)
Subgroup II	ST-464	0.2	0.2		0	0	5(2)	2(1)	4(4)	20(7)	19	21
	ST-493	0.2	0.2	0		0	5(2)	2(1)	4(4)	20(7)	19	21
	ST-613	0.2	0.2	0	0		5(2)	2(1)	4(4)	20(7)	19	21
Subgroup III	ST-391	0.7	0.5	1.2	1.2	1.2		7(3)	5(4)	24(8)	22(2)	25(2)
	<i>H. uvarum</i>	0.5	0.7	0.4	0.4	0.4	1.3		5(4)	20(7)	22(1)	23(1)
	G10p1											
	<i>H. meyeri</i>	0.9	1.1	0.8	0.8	0.8	1.1	1.0		23(10)	23(4)	25(4)
	G4p4											
	<i>H. meyeri</i>	3.8	4.0	4.8	4.8	4.8	4.4	3.6	4.3		38(7)	39(6)
	G4p1											
	<i>H. meyeri</i>	3.5	3.6	3.2	3.2	3.2	3.9	3.8	4.0	6.8		4(0)
	<i>H. uvarum</i>	3.8	4.0	3.7	3.7	4.3	4.3	4.2	4.7	4.7	0.7	

Remark: A upper right triangle refers to nucleotide differences in D1/D2 including gaps. (Numerals in parentheses indicate the number of gaps) and lower triangle refers to % nucleotide differences.