

Research Title Preparation of Lead Zirconium Titanate for
Electronic Ceramics

Author Mr. Pini J Thongsunon

M.S. Teaching Chemistry

Examining Committee :

Asist.Prof.Dr.Viratana Opasnipath.	Chairman
Assoc.Prof.Dr. Tawee Tunkasiri	Member
Assoc.Prof.Dr.Prasak Thavornyutikarn	Member

Abstract

The preparation of lead zirconium titanate by using lead nitrate solution (Pb:15.0 wt%), zirconium nitrate solution (Zr:18.7 wt%) and titanium tetrabutoxide (Ti:14.1 wt %) have been investigated. The liquid component then evaporated at 80-110 ° C by using I.R. lamp. The yield of the solid phase (product) was 7-8 % W/V.

Physical property of the products have also been studied by X-rays diffraction technique. The results show that only few prepared products have d-spacing corresponding to the reference PZT.

The composition of lead, zirconium and titanium have been tested by both qualitative and quantitative techniques. The prepared products showed negative test of lead. This proved that the main composition of the prepared products were not PZT.