

REFERENCES

- [1] Frederick, L. Metal catalysed intumescence of polyhydroxyl compounds. University of Pretoria, 2003.
- [2] Spang, R., and Bielemem, J., Additive for coatings.(Germany: WILEY-VCH Verlag GmbH, 2000), pp.325-337.
- [3] Gunduz, G., Kusakurek, D., Kayadan, S., Flame retardant alkyd paint. Polymer Degradation and Stability. 64 (1999): 501-504.
- [4] Satisarat, P., Synthesis of flame retardant polyphosphates and polyphosphonates, Master's Thesis, Department of Chemistry, Faculty of Science, Chulalongkorn University, 2001.
- [5] Zhang, S., Harrocks, A.R., A review of flame retardant polypropylene fibers. Progress in Polymer Science. 28 (2003): 1517-1538.
- [6] Pinto, A.U., Visconte, L.L., Gallo, J., Nunes, R.C., Flame retardancy in thermoplastic polyurethane elastomers (TPU) with mica and alumina trihydrate (ATH). Polymer Degradation and Stability. 69 (2000): 257-260.
- [7] Barfar, A.A., Effect of various combinations of flame-retardant fillers on flammability radiation cross-linked polyvinylchloride (PVC). Polymer Degradation and Stability. 82 (2003): 333-340.
- [8] Duquensne, S., Magnet, S., Jama, C., Delobel, R., Intumescent paints: fire protective coatings for metallic substrates. Surface & Coatings Technology. 180-181 (2004): 302-307.
- [9] Swapan, K.G., Functional coating and Microencapsulation: A general Perspective. Functional coating. (2006).
- [10] Douglas, K.S., Paul K., The role of fungicides and algaecides in architectural paint. Paint and coatings industry magazine. (October, 1994).
- [11] Jeongynu, D., Hun, S., Hyoungseok, S., Yangseob, S., Antifungal effects of cement mortars with two types of organic antifungal agents. Cement and Concrete Research. 35 (2005): 493-494.
- [12] Zimmermann, D.A., Synergistic biocide compositions. US.Patent , 20050124674A1.

- [13] Preet, M.S.B., Mohinder, P.M., Vijay, K.K., Amidine derived 1,3-diazabuta-1,3-dienes as potential antibacterial and antifungal agents. Bioorganic & Medicinal Chemistry Letters. 14(2004): 3821-3824.
- [14] Gaglani, K., Roger, E., Gordhandas, G.T., Antimicrobial mixtures comprising iodopropynyl compounds and dimethyldithiocarbamate derivatives. US Patent, 20050049224A1.
- [15] Antifungal test standand for paint., Thai Industial Standard 285. 21(1982).
- [16] Thedphitak, N., Anti-phytopathogenic fungical activity of benzoic acid and cinnamic acid derivatives. Master's Thesis, Department of Biotechnology, Faculty of Science, Chulalongkorn University, 2005.
- [17] Fungicides, Chapter 15. [online]. Available from <http://www.npic.orst.edu> (2007, Mar), pp.137-154
- [18] Wanchan, N., Plant pathogenic fungal agents based on berberine. Master's Thesis, Department of Biotechnology, Faculty of Science, Chulalongkorn University, 2006.

APPENDIX A

ANTIFUNGAL PHOTO OF ACRYLIC EMULSION PAINTS

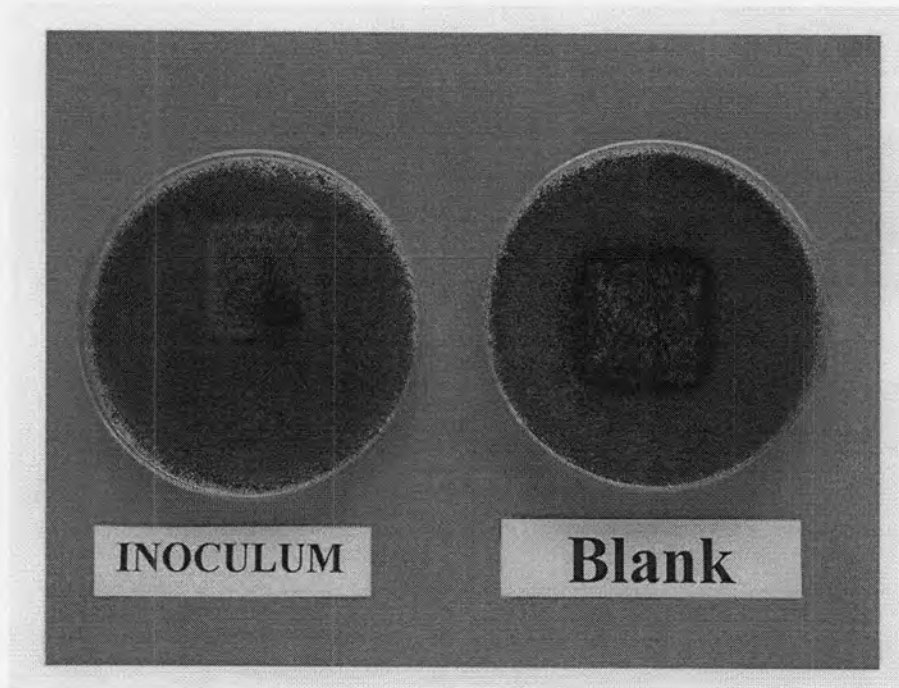


Figure A1 Antifungal photo of blank (no fungicide), very heavy fungus growth on paint film.

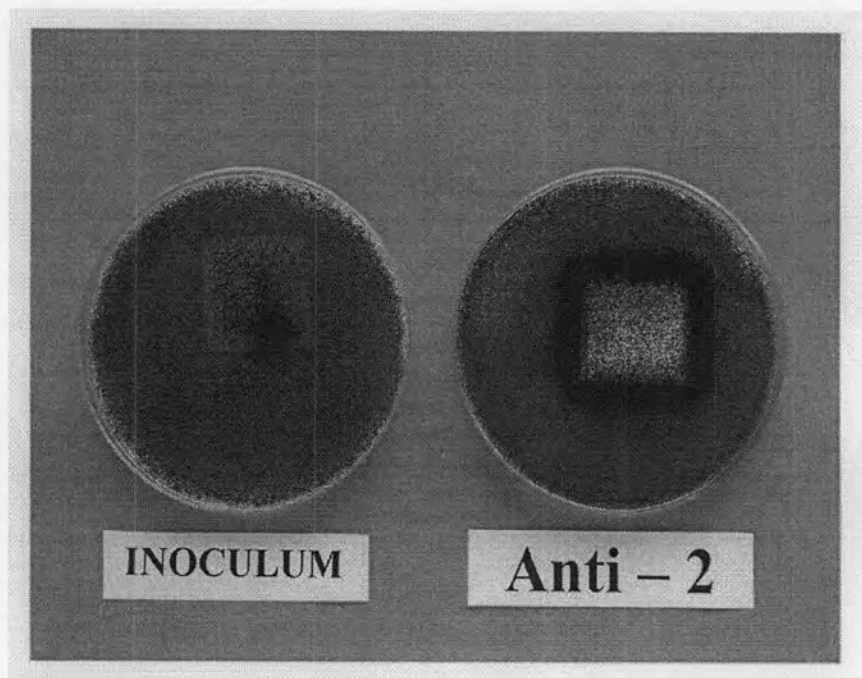


Figure A2 Antifungal photo of anti-2, heavy fungus growth on paint film.

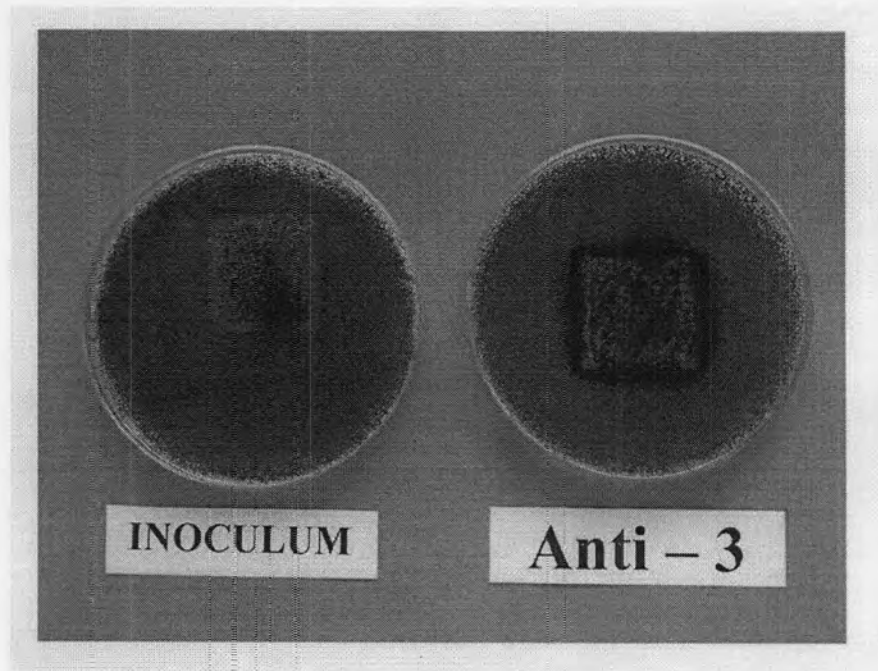


Figure A3 Antifungal photo of anti-3, very heavy fungus growth on paint film.

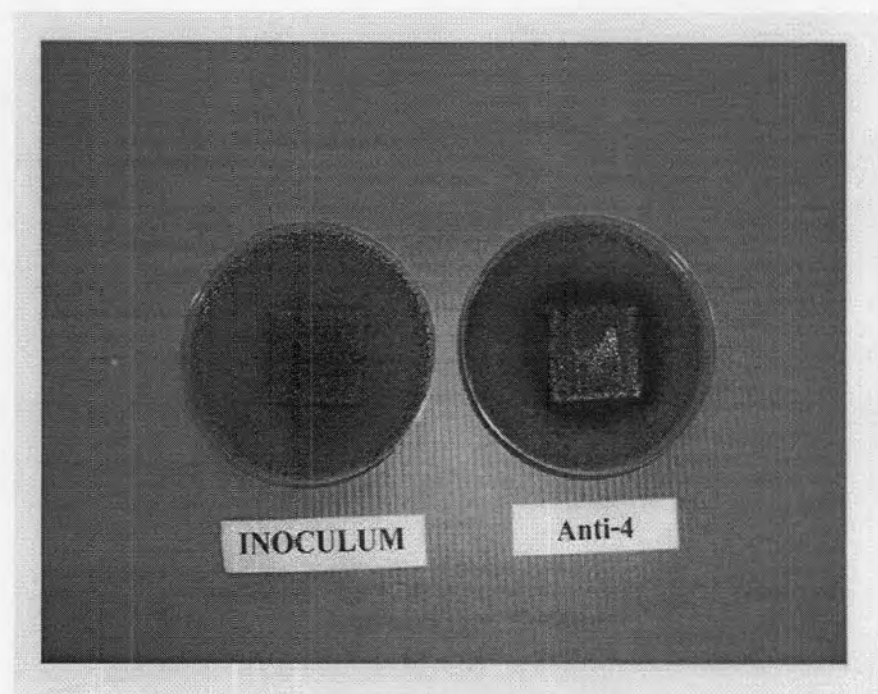


Figure A4 Antifungal photo of anti-4, heavy fungus growth on paint film.

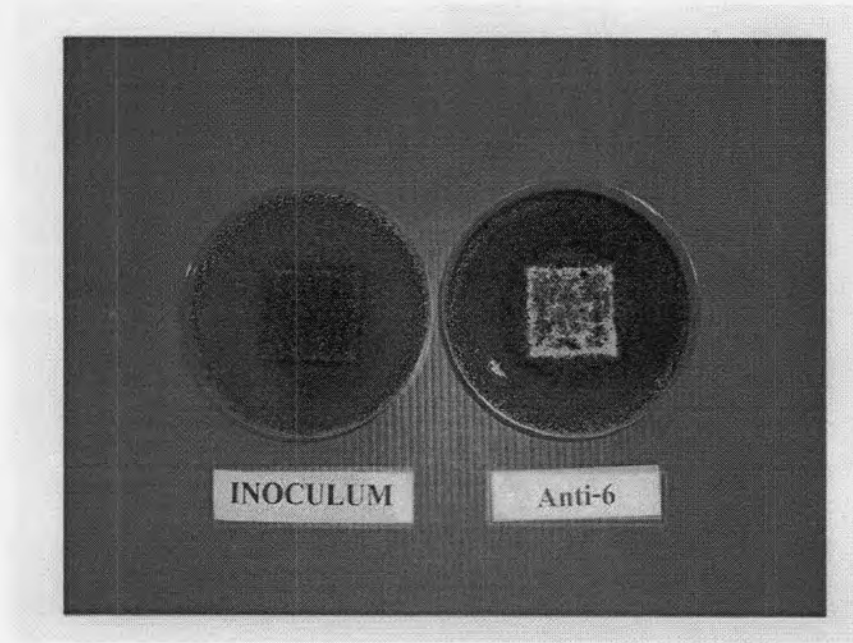


Figure A5 Antifungal photo of anti-6, moderate fungus growth on paint film.

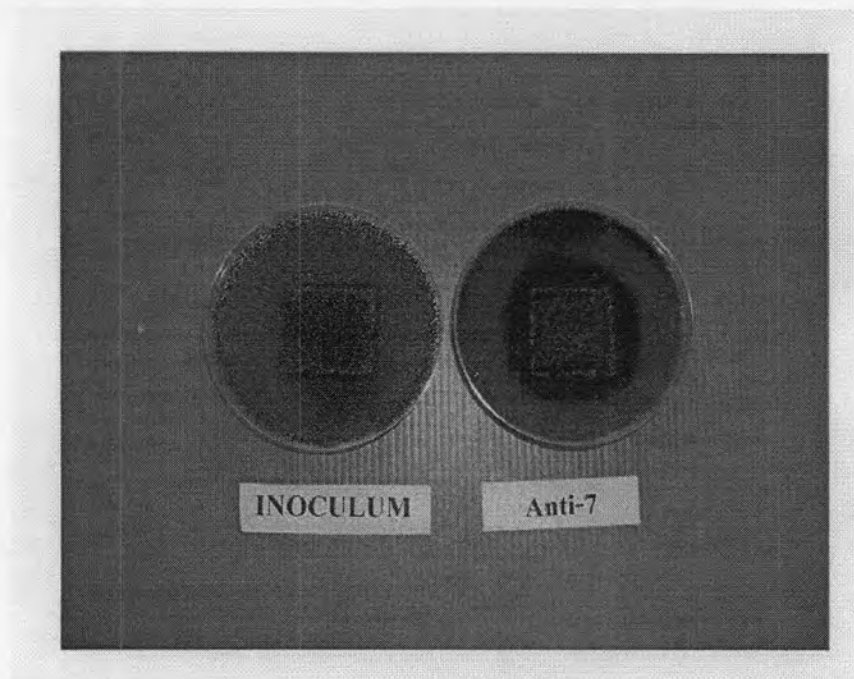


Figure A6 Antifungal photo of anti-7, very heavy fungus growth on paint film.

APPENDIX B

Table B1
SPECIFICATION AND TEST METHOD FOR
INTERIOR EMULSION PAINT IN THAILAND

Characteristic	Specification	
	Standard value	Methods
Fineness (μ)	<60	TISI 285 Vol.8
Opacity (%)	≥ 80	TISI 285 Vol.16
Bending test	6 mm.	TISI 285 Vol.19
Water resistance	18 hrs.	TISI 285
Washability (100 cycles)	Cleaned	TISI 285
Fungal Resistant	No fungal growth.	TISI 285 Vol.21

VITA

Tantima Kantasut was born on January 17, 1976 in Nakornsrihammarat Province, Thailand. She received a Bachelor's Degree of Science in Chemistry from Prince Of Songkhla University in 1996. She has been working at ICI Paints (Thailand) Ltd. She continued the Master Program of Multidisciplinary of Petrochemistry and Polymer Science, Faculty of Science, Chulalongkorn University and completed the program in 2006.

