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Possible phosphate interference with copper-silver ionization for *Legionella* control

Sir,

In an article entitled 'Water disinfection with ozone, copper and silver ions, and temperature increase to control *Legionella*: seven years of experience in a university teaching hospital' (in May 2005), the authors reported their unsatisfactory experience with copper-silver ionization in eradicating legionella in the hot water plumbing system.¹

The authors stated that the anticorrosive agent, namely trisodium phosphate, was added to the water system together with copper and silver ions. It is important to note that copper ions can bind to phosphate, thereby reducing their efficacy in eradicating legionella. Reduction of the microbiocidal effect of copper has been reported when copper was complexed by phosphates.² An unpublished result showed that phosphate interfered with the efficacy of copper in *Escherichia coli* (ATCC 11229) eradication in a batch disinfection experiment.³ Phosphates also bind to silver ions, resulting in increased inactivation time.⁴ A similar anticorrosion product, zinc orthophosphate, was used in one US hospital (G. Lyslo, personal communication, 1996) that reported failure of copper-silver ionization to eradicate legionella.⁵ However, the role of zinc orthophosphate was never investigated in that hospital. Thus, we suspect that the copper and silver ions added by the ionization process may be inactive in killing legionella because of the presence of phosphates. To resolve this issue, the authors can simply conduct a kill curve experiment in a beaker to determine the effect of trisodium phosphate on legionella eradication by copper and silver ions.

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Prevalence rate of positive tuberculin test among Thai hospital personnel: a summary

Sir,

Tuberculosis (TB) is an important public health problem in the tropics, including Thailand. Healthcare workers (HCWs) are at increased risk and implementation of nosocomial TB control measures is necessary.¹ Franchi *et al.* proposed that recommendations for the control of TB in healthcare settings underlined the need for implementing accurate risk evaluation in all hospital units and targeted tuberculin test (TT) screening programmes among HCWs.² Specific targeted TT screening programmes are not performed in all Thai hospitals. Due to the recent introduction of the concept of hospital accreditation in Thailand, this screening has been launched in some tertiary care hospitals. The study of the results from a TT screening programme among hospital personnel would provide good data for planning a TB