Appendix B
Executive Summary of Survey of Laboratory Practices for Legionella Infection in Ireland, 2005

Background
The reported incidence rate of legionnaires' diseases in Ireland increased from 0.3 per million in 1994 to 3.8 in 2007. In 2007, the overall European rate for legionellosis was 11.4 per million (based on a population of 520.3 million in 33 countries). Under-diagnosis and under-reporting are thought to lead to a significant under-estimation of incidence in many countries.

In January 2005, the Legionnaires' Disease Subcommittee of the Scientific Advisory Committee of HPSC decided to undertake a laboratory survey to estimate the current level of provision of diagnostic and environmental laboratory services for *Legionella* infection in Ireland.

Methods
A cross-sectional survey of laboratories in Ireland was conducted in April 2005 to assess the extent and type of *Legionella* infection testing being undertaken. An eight-page questionnaire was posted to all microbiological laboratories in the country.

Results
The response rate was 77% (37/48). Thirty-eight percent (38%) of responding laboratories undertook testing for *Legionella* infection. Of these laboratories, 86% tested clinical specimens only, 7% environmental only and 7% both clinical and environmental specimens. Thirty-nine percent (39%) of laboratories who tested clinical specimens used the urinary antigen test (UAT) only; 23% UAT and serology; 15% UAT and culture method; and 23% used all three diagnostic methods. Ninety-two percent (92%) of environmental samples were obtained from hospital sites.

In 2005, one laboratory was accredited for clinical testing and five were seeking accreditation. One laboratory was accredited for environmental testing and two were seeking accreditation. In 2007, four laboratories are accredited for *Legionella* testing: two for clinical testing and two for environmental testing. Sixteen percent (16%) of all laboratories surveyed send isolates to a reference laboratory outside the country for further testing. Nineteen percent of responding laboratories had agreed protocols with clinicians for undertaking *Legionella* testing on all cases of community-acquired pneumonia.

Conclusions/recommendations
The results of this survey highlight that over one-third of laboratories surveyed undertook *Legionella* testing and that in 2005, there were only two laboratories accredited nationally for this, one for clinical testing and one for environmental testing. In 2007, four laboratories were accredited, two for clinical testing and two for environmental testing. As there is no designated national reference laboratory for *Legionella* testing approximately one-fifth of laboratories sent specimens abroad for typing. In countries where detection of *Legionella* reaches the 'gold standard' e.g. Denmark, the national reference facility plays a pivotal role. In 2005, only two laboratories undertook environmental testing indicating a requirement to improve facilities for environmental sample testing at a regional/local level. Protocols between clinicians and consultant microbiologists for testing for legionnaires' disease in cases of community-acquired pneumonia and for consideration of the diagnosis in cases of nosocomial pneumonia need to be developed. Lack of resources and the need for a national reference laboratory were identified by respondents as the main issues to be addressed for future development of services for *Legionella* testing in Ireland.