

Title Towards standard methods for the detection of *Cryptosporidium parvum* on lettuce and raspberries.
Part 2: Validation

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Abstract

We report the results of interlaboratory collaborative trials of methods to detect oocysts of the protozoan parasite *Cryptosporidium parvum* on lettuce and raspberries. The trials involved eight expert laboratories in the United Kingdom. Samples comprised 30 g lettuce, and 60 g raspberries. Lettuce samples were artificially contaminated at three levels: low (8.5–14.2 oocysts), medium (53.5–62.6 oocysts), and high (111.3–135.0 oocysts). Non-contaminated lettuce samples were also tested. The method had an overall sensitivity (correct identification of all artificially contaminated lettuce samples) of 89.6%, and a specificity (correct identification of non-contaminated samples) of 85.4%. The total median percentage recovery (from all artificially contaminated samples) produced by the method was 30.4%. The method was just as reproducible between laboratories, as repeatable within a laboratory. Raspberry samples were artificially contaminated at three levels: low (8.5–26.8 oocysts), medium (29.7–65.7 oocysts), and high (53.9–131.3 oocysts). Non-contaminated raspberry samples were also tested. The method had an overall sensitivity (correct identification of all artificially contaminated raspberry samples) of 95.8%, and a specificity (correct identification of non-contaminated samples) of 83.3%. The total median percentage recovery (from all artificially contaminated samples) produced by the method was 44.3%. The method was just as reproducible between laboratories, as repeatable within a laboratory. The results of the collaborative trial indicate that these assays can be used effectively in analytical microbiological laboratories.