

Collection Rule data is broader (*i.e.*, more source-to-source variability). Also, the occurrence of *Cryptosporidium* in flowing stream sources was greater and more variable than in reservoir/lake sources (shown in USEPA 2003b).

The fact that only 44% of Information Collection Rule plants had one or more samples positive for *Cryptosporidium* and that only 7% of all Information Collection Rule samples were positive for *Cryptosporidium* suggests that oocyst levels were relatively low in many source waters. However, as noted earlier, it is expected that *Cryptosporidium* oocysts were present in many more source waters at the time

of sampling and were not detected due to poor analytical method recovery and low sample volumes.

This concept is illustrated by Figure III-2, which shows the likelihood of no oocysts being detected by the Information Collection Rule method as a function of source water concentration (assumes median Information Collection Rule sample volume of 3 L). As can be seen in Figure III-2, when the source water concentration is 1 oocyst/L, which is a relatively high level, the probability of no oocysts being detected in a 3 L sample is 73%; for a source water with 0.1 oocyst/L, which is close to the median occurrence level, the

probability of a non-detect is 97%. Consequently, EPA has concluded that it is appropriate and necessary to use a statistical model to estimate the underlying distribution.

EPA modeled *Cryptosporidium* occurrence separately for filtered and unfiltered plants that participated in the Information Collection Rule because unfiltered plants comply with different regulatory requirements than filtered plants. As shown in Table III-3, the occurrence of *Cryptosporidium* was lower for unfiltered sources.

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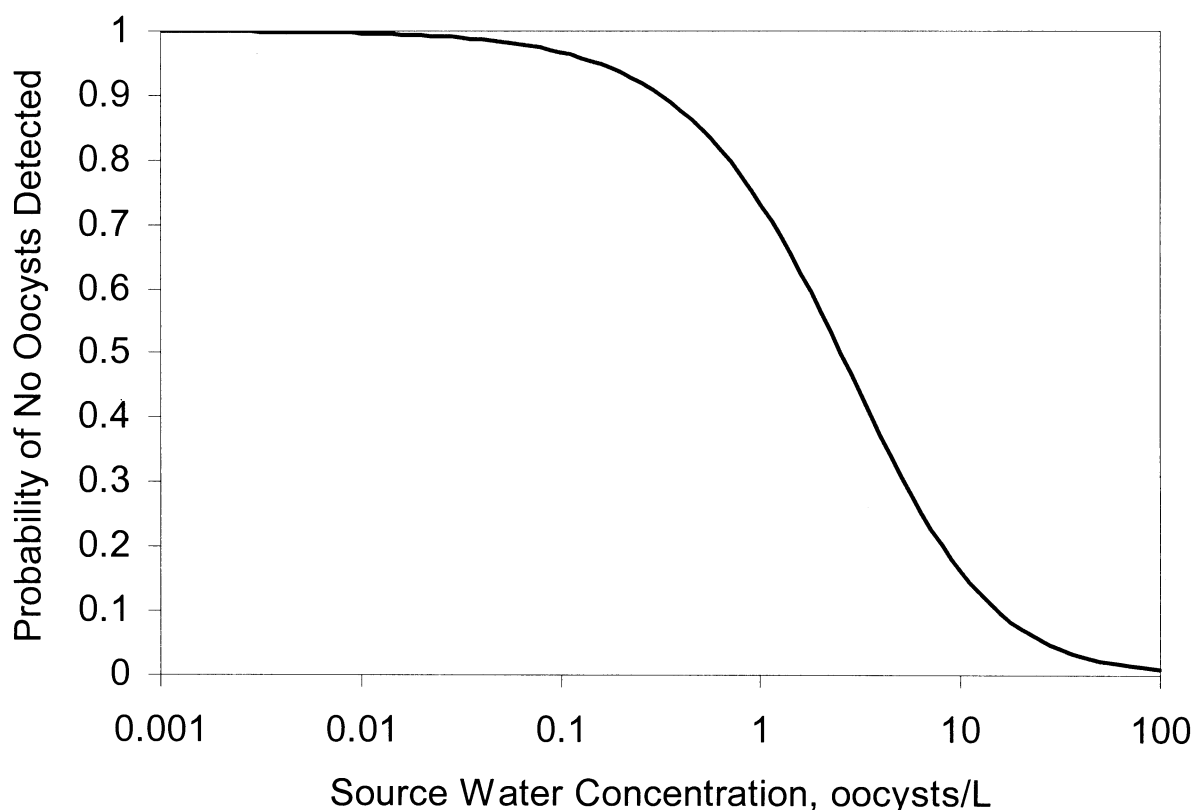


Figure III-2.-- Probability of No Oocysts Being Detected by the Information Collection Rule Method as a Function of Source Water *Cryptosporidium* Concentration