§ 141.711  Filtered system additional Cryptosporidium treatment requirements.

(a) Filtered systems must provide the level of additional treatment for Cryptosporidium specified in this paragraph based on their bin classification as determined under §141.710 and according to the schedule in §141.713.

(b)(1) Filtered systems must use one or more of the treatment and management options listed in §141.715, termed the microbial toolbox, to comply with the additional Cryptosporidium treatment required in paragraph (a) of this section.

(2) Systems classified in Bin 3 and Bin 4 must achieve at least 1-log of the additional Cryptosporidium treatment required under paragraph (a) of this section using either one or a combination of the following: bag filters, bank

<table>
<thead>
<tr>
<th>Bin Classification Table for Filtered Systems</th>
</tr>
</thead>
<tbody>
<tr>
<td>For systems that are: With a Cryptosporidium bin concentration of</td>
</tr>
<tr>
<td>. . . required to monitor for Cryptosporidium under §141.701.</td>
</tr>
<tr>
<td>Cryptosporidium &lt; 0.075 oocysts/L ..........</td>
</tr>
<tr>
<td>0.075 oocysts/L ≤ Cryptosporidium &lt; 1.0 oocysts/L.</td>
</tr>
<tr>
<td>1.0 oocysts/L ≤ Cryptosporidium &lt; 3.0 oocysts/L.</td>
</tr>
<tr>
<td>Cryptosporidium ≥ 3.0 oocysts/L ..........</td>
</tr>
<tr>
<td>. . . serving fewer than 10,000 people and NOT required to monitor for Cryptosporidium under §141.701(a)(4).</td>
</tr>
</tbody>
</table>

*Based on calculations in paragraph (a) or (d) of this section, as applicable.*

(d) Following completion of the second round of source water monitoring required under §141.701(b), filtered systems must recalculate their Cryptosporidium bin concentration using the Cryptosporidium results reported under §141.701(b) and following the procedures in paragraphs (b)(1) through (4) of this section. Systems must then redetermine their bin classification using this bin concentration and the table in paragraph (c) of this section.

(e)(1) Filtered systems must report their initial bin classification under paragraph (c) of this section to the State for approval no later than 6 months after the system is required to complete initial source water monitoring based on the schedule in §141.701(c).

(2) Systems must report their bin classification under paragraph (d) of this section to the State for approval no later than 6 months after the system is required to complete the second round of source water monitoring based on the schedule in §141.701(c).

(f) Failure to comply with the conditions of paragraph (e) of this section is a violation of the treatment technique requirement.

§ 141.711 Filtered system additional Cryptosporidium treatment requirements.

(1) Filtered systems must use one or more of the treatment and management options listed in §141.715, termed the microbial toolbox, to comply with the additional Cryptosporidium treatment required in paragraph (a) of this section using one or a combination of the following: bag filters, bank

1. As determined by the State such that the total Cryptosporidium removal and inactivation is at least 4.0-log.
2. As determined by the State such that the total Cryptosporidium removal and inactivation is at least 5.0-log.
3. As determined by the State such that the total Cryptosporidium removal and inactivation is at least 5.5-log.
filtration, cartridge filters, chlorine dioxide, membranes, ozone, or UV, as
described in §§141.716 through 141.720.

(c) Failure by a system in any month
to achieve treatment credit by meeting
criteria in §§141.716 through 141.720 for
microbial toolbox options that is at
least equal to the level of treatment re-
quired in paragraph (a) of this section
is a violation of the treatment tech-
nique requirement.

(d) If the State determines during a
sanitary survey or an equivalent
source water assessment that after a
system completed the monitoring con-
ducted under §141.701(a) or §141.701(b),
significant changes occurred in the sys-
tem’s watershed that could lead to in-
creased contamination of the source
water by Cryptosporidium, the system
must take actions specified by the
State to address the contamination.
These actions may include additional
source water monitoring and/or imple-
menting microbial toolbox options list-
ed in §141.715.

§ 141.712 Unfiltered system
Cryptosporidium treatment require-
ments.

(a) Determination of mean
Cryptosporidium level.
(1) Following
completion of the initial source water
monitoring required under §141.701(a),
unfiltered systems must calculate the
arithmetic mean of all Cryptosporidium
sample concentrations reported under
§141.701(a). Systems must report this
value to the State for approval no later
than 6 months after the month the sys-
tem is required to complete initial
source water monitoring based on the
schedule in §141.701(c).
(2) Following completion of the sec-
ond round of source water monitoring
required under §141.701(b), unfiltered
systems must calculate the arithmetic
mean of all Cryptosporidium sample
concentrations reported under
§141.701(b). Systems must report this
value to the State for approval no later
than 6 months after the month the sys-
tem is required to complete the second
round of source water monitoring
based on the schedule in §141.701(c).
(3) If the monthly Cryptosporidium
sampling frequency varies, systems
must first calculate a monthly average
for each month of monitoring. Systems
must then use these monthly average
concentrations, rather than individual
sample concentrations, in the calcu-
ation of the mean Cryptosporidium level
in paragraphs (a)(1) or (2) of this sec-
tion.
(4) The report to the State of the mean
Cryptosporidium levels calculated
under paragraphs (a)(1) and (2) of this
section must include a summary of the
source water monitoring data used for
the calculation.
(5) Failure to comply with the condi-
tions of paragraph (a) of this section is
a violation of the treatment technique
requirement.

(b) Cryptosporidium inactivation re-
quirements. Unfiltered systems must
provide the level of inactivation for
Cryptosporidium specified in this para-
graph, based on their mean
Cryptosporidium levels as determined
under paragraph (a) of this section and
according to the schedule in §141.713.
(1) Unfiltered systems with a mean
Cryptosporidium level of 0.01 oocysts/L
or less must provide at least 2-log
Cryptosporidium inactivation.
(2) Unfiltered systems with a mean
Cryptosporidium level of greater than
0.01 oocysts/L must provide at least 3-
log Cryptosporidium inactivation.

(c) Inactivation treatment technology
requirements. Unfiltered systems must
use chlorine dioxide, ozone, or UV as
described in §141.720 to meet the
Cryptosporidium inactivation require-
ments of this section.
(1) Systems that use chlorine dioxide
or ozone and fail to achieve the
Cryptosporidium inactivation required
in paragraph (b) of this section on more
than one day in the calendar month are
in violation of the treatment technique
requirement.
(2) Systems that use UV light and
fail to achieve the Cryptosporidium in-
activation required in paragraph (b) of
this section by meeting the criteria in
§141.720(d)(3)(ii) are in violation of the
treatment technique requirement.
(3) Use of two disinfectants. Unfiltered
systems must meet the combined
Cryptosporidium inactivation require-
ments of this section and Giardia
lambia and virus inactivation require-
ments of §141.72(a) using a minimum of
two disinfectants, and each of two dis-
infactants must separately achieve the