AccuSpike™-IR

γ-Irradiation-Preserved Giardia Cysts and Cryptosporidium Oocysts

Explanation: *Giardia lamblia* and *Cryptosporidium parvum* are common, ubiquitous intestinal parasitic protozoa that cause gastroenteritis in man and lower animals. Both organisms have a reservoir of host animals and can be spread through fecal contamination of food, water, and fomites. The *Cryptosporidium* oocyst is a nearly round, encysted organism of approximately 3-5 um in diameter, while the *Giardia* cyst is oval-shaped and measures approximately 8-13 um in length and 7-10 um in width.

Product Description: AccuSpike™-IR is designed for percent recovery determination with matrix (environmental) and reagent water samples by US EPA Methods 1622 and 1623. Each 1.5 mL polypropylene vial contains a count, by flow-cytometry cell sorting, of 100 each of *Giardia lamblia* cysts and *Cryptosporidium parvum* oocysts. The organisms are suspended in 0.75 mL of reagent grade water with 0.01% Tween 20, and have been inactivated and preserved by gamma (γ) irradiation. The internal structures of the cysts and oocysts are intact and easily identified, and the cells are fully reactive with antibody-coated immunomagnetic particles, fluorescent antibodies and DAPI. Although they are non-infectious, as proven by animal inoculation experiments, proper procedure and personal protective equipment is recommended as per Method 1623.

AccuSpike™-IR is available in quantities of 3, 6, and 12 vials. The vials are shipped in compact, crush-resistant, plastic clamshell boxes.

Catalog Number	Kit Description
PACIR3	Box containing 3 vials.
PACIR6	Box containing 6 vials.
PACIR12	Box containing 12 vials.

Kit Includes:

- 3, 6, or 12 vials containing *Giardia* cysts and *Cryptosporidium* oocysts
- 1 - 2 microtube(s) containing 2.0 mL or 4.0 mL EluMax™ Elution Buffer

Other Lab Supplies Not Included, but Available:

- Our complete line of immunofluorescence kits for detection and identification of *Giardia* and *Cryptosporidium*. Please visit our website for more information: **www.waterborneinc.com**.
- C101: 3.5 mL BlockOut™ Counterstain
- D101: 0.4 mL DAPI
- M101: 3.5 mL No-Fade™ Mounting Medium
- M102: 3.5 mL Elvanol No-Fade™ Mounting Medium
- S100-1-9MM: One-well SuperStick™ Slides, 40/box, 9 mm well
- S100-1: One-well SuperStick™ Slides, 40/box, 14 mm well
- S100-2: Two-well Super Stick™ Slides, 40/box, 15 mm wells
- S100-3: Three-well SuperStick™ Slides, 40/box, 14 mm wells

AccuSpike™-IR Organism Transfer Protocol:
(Procedure for transfer of organisms from AccuSpike™-IR vial only.)

1. Uncap AccuSpike™-IR vial, using the tube opener provided, and add 0.25 mL EluMax™.
2. **Initial Transfer**: Re-cap vial and vortex for 15 seconds. If a vortexer is not available, shake vial vigorously for 15 seconds.
3. Carefully open the vial, using the tube opener, if necessary, and, using a Pasteur pipet, remove the liquid from the vial and any liquid that has collected in the cap. Add this to the 10 L or more of water to be used in Method 1623. Retain pipet for use in subsequent steps.
4. **First Rinse**: Add 0.75 mL de-ionized water to the vial, re-cap tightly, and vortex for 15 seconds. If a vortexer is not available, shake vial vigorously for 15 seconds.
5. Carefully open the vial, using the tube opener, and using the same pipet, remove the liquid from the vial and any fluid present in the cap of the vial, and add this to the water. Retain pipet for use in subsequent steps.
6. **Second Rinse**: Repeat steps 4 & 5.
7. Discard the empty vial.
8. Process sample per laboratory method or US EPA Method 1622 or 1623. Please see US EPA Method 1622 or Method 1623 Sample Spiking Procedure. (Visit www.epa.gov for more information.)
9. Calculate percent recovery using the following mathematical method:
   Percent Recovery is determined by counting the number of organisms recovered from the processed sample divided by the number of organisms (100 cells) in one AccuSpike™-IR vial, multiplied by 100.

$$\frac{\text{Number of Recovered Organisms}}{\text{Number of Organisms in AccuSpike™-IR Vial}} \times 100 = \text{Percent Recovery}$$

Storage: Store vials upright at 4 ° C. **DO NOT FREEZE!**

Expiration Dates: AccuSpike™-IR has an expiration of 12 weeks after the date of production. Each vial is clearly marked with an expiration date.

Expiration Notice: If AccuSpike™-IR will be used for *Cryptosporidium* analysis **ONLY** – the expiration date is 16 weeks after the date of production.

For assistance, technical questions, or to inquire about other Waterborne™, Inc. products, please call, FAX, or email us.

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