

§ 147.17

§ 147.17 Laboratory procedure recommended for the bacteriological examination of cull chicks for salmonella.

The laboratory procedure described in this section is recommended for the bacteriological examination of cull chicks from egg-type and meat-type chicken flocks and waterfowl, exhibition poultry, and game bird flocks for salmonella.

(a) From 25 randomly selected 1- to 5-day-old chicks that have not been placed in a brooding house, prepare 5 organ pools, 5 yolk pools, and 5 intestinal tissue pools as follows:

(1) *Organ pool*: From each of five chicks, composite and mince 1- to 2-gram samples of heart, lung, liver, and spleen tissues and the proximal wall of the bursa of Fabricius.

(2) *Yolk pool*: From each of five chicks, composite and mince 1- to 2-gram samples of the unabsorbed yolk sac or, if the yolk sac is essentially absent, the entire yolk stalk remnant.

(3) *Intestinal pool*: From each of five chicks, composite and mince approximately 0.5 cm² sections of the crop wall and 5-mm-long sections of the duodenum, cecum, and ileocecal junction.

(b) Transfer each pool to tetrathionate selective enrichment broth (Hajna or Mueller-Kauffmann) at a ratio of 1 part tissue pool to 10 parts broth.

(c) Repeat the steps in paragraphs (a) and (b) of this section for each five-chick group until all 25 chicks have been examined, producing a total of 15 pools (5 organ, 5 yolk, and 5 intestinal).

(d) Culture the 15 tetrathionate pools as outlined for selective enrichment in illustration 2 of § 147.11. Incubate the organ and yolk pools for 24 hours at 37 °C and the intestinal pools at 41.5 °C. Plate as described in illustration 2 of § 147.11 and examine after both 24 and 48 hours of incubation. Confirm suspect colonies as described. Further culture all salmonella-negative tetrathionate broths by delayed secondary enrichment procedures described for environmental, organ, and intestinal samples in illustration 2 of § 147.11. A colony lift assay may also be utilized as a supplement to TSI and LI agar picks of suspect colonies.

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§ 147.18 Chick meconium testing procedure for salmonella.

Procedure:

(a) Record the date, source, and flock destination on the "Meconium Worksheet."

(b) Shake each plastic bag of meconium until a uniform consistency is achieved.

(c) Transfer a 25 gm sample of meconium to a sterile container. Add 225 mL of a preenrichment broth to each sample (this is a 1:10 dilution), mix gently, and incubate at 37 °C for 18-24 hours.

(d) Enrich the sample with selective enrichment broth for 24 hours at 42 °C.

(e) Streak the enriched sample onto brilliant green-Novobiocin (BGN) agar and xylose-lysine-tergitol 4 (XLT4) agar.

(f) Incubate both plates at 37 °C for 24 hours and process suspect salmonella colonies according to § 147.11.

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Subpart C—Sanitation Procedures

§ 147.21 Flock sanitation.

To aid in the maintenance of healthy flocks, the following procedures should be practiced:

(a) Baby poultry should be started in a clean brooder house and maintained in constant isolation from older birds and other animals. Personnel that are in contact with older birds and other animals should take precautions, including disinfection of footwear and change of outer clothing, to prevent the introduction of infection through droppings that may adhere to the shoes, clothing, or hands. (See § 147.24(a).)

(b) Range used for growing young stock should not have been used for poultry the preceding year. Where broods of different ages must be kept on the same farm, there should be complete depopulation of brooder houses and other premises following infection of such premises by any contagious disease.

(c) Poultry houses should be screened and proofed against free-flying birds. An active rodent eradication campaign is an essential part of the general sanitation program. The area adjacent to the poultry house should be kept free