

Table S2. The isolation rates of *Salmonella* in the birds in the *Salmonella pullorum*, *Salmonella give* and *Salmonella kentucky* challenged groups

Challenge strain	Group A (challenged-treated) ¹	Group B (challenge-untreated) ²
<i>Salmonella pullorum</i>	50%	90%
<i>Salmonella give</i>	40%	80%
<i>Salmonella kentucky</i>	80%	90%

Note: If *Salmonella* is isolated from any samples of cloaca swabs, cecum and mixture organs in a bird, the bird is determined to be a *salmonella* carrier.

¹ Star anise-cinnamon essential oil (SCEO) was supplemented in the drinking water.

² No SCEO was supplemented in the drinking water.

Table S3. The isolation rates of *Salmonella pullorum* in the bird's different organs in the *Salmonella pullorum* challenged subgroups

Number	Subgroup A1 ¹			Subgroup B1 ²		
	Mixture organs ³	cecum	Cloaca swab	Mixture organs	cecum	Cloaca swab
1	+	-	-	+	-	-
2	+	+	-	-	+	-
3	-	-	-	+	-	-
4	-	+	-	+	-	-
5	-	-	-	+	-	-
6	-	-	-	-	+	-
7	+	+	-	+	+	+
8	+	-	-	+	+	+
9	-	-	-	-	-	-
10	-	-	-	+	+	+
Total	40.0%	30%	0%	70%	50%	30%

¹ Star anise-cinnamon essential oil (SCEO) was supplemented in the drinking water.

² No SCEO was supplemented in the drinking water.

⁺: *Salmonella* was detected.

⁻: No *Salmonella* was detected.

³: Mixture organs refers to the mixture of visceral parenchyma organs including heart, liver and spleen.

Table S4. The isolation rates of *Salmonella give* in the bird's different organs in the *Salmonella give* challenged subgroups

Number	Subgroup A2 ¹			Subgroup B2 ²		
	Mixture organs ³	cecum	Cloaca swab	Mixture organs	cecum	Cloaca swab
1	-	-	-	+	-	-
2	+	-	-	-	+	-
3	-	+	-	-	-	-
4	-	+	-	-	+	-
5	-	-	-	+	-	-
6	-	-	-	-	-	-
7	-	-	-	-	+	+
8	-	-	-	+	-	+
9	-	-	-	+	+	-
10	+	-	-	-	+	-
Total	20%	20%	0%	40%	50%	20%

¹ Star anise-cinnamon essential oil (SCEO) was supplemented in the drinking water.

² No SCEO was supplemented in the drinking water.

³:Mixture organs refers to the mixture of visceral parenchyma organs including heart, liver and spleen.

⁺: *Salmonella* was detected.

⁻: No *Salmonella* was detected.

Table S5. The isolation rates of *Salmonella kentucky* in the bird's different organs in the *Salmonella kentucky* challenged subgroups

Number	Subgroup A3 ¹			Subgroup B3 ²		
	Mixture organs ³	cecum	Cloaca swab	Mixture organs	cecum	Cloaca swab
1	-	+	+	+	+	-
2	+	+	+	+	-	+
3	-	-	+	-	-	-
4	-	-	-	+	-	+
5	-	-	-	-	+	-
6	-	+	+	-	+	-
7	-	+	-	+	-	-
8	-	+	+	+	+	-

9	-	+	+	+	+	+
10	+	+	-	-	+	-
Total	20%	70%	60%	60%	60%	30%

¹ Star anise-cinnamon essential oil (SCEO) was supplemented in the drinking water.

² No SCEO was supplemented in the drinking water.

³:Mixture organs refers to the mixture of visceral parenchyma organs including heart, liver and spleen.

⁺: *Salmonella* was detected.

⁻: No *Salmonella* was detected.