

COMPARISON OF THREE COMMONLY USED MEDIUMS FOR THE ISOLATION OF *M. GALLISEPTICUM* FROM EXUDATE OF INFECTED TURKEYS (*)

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Two mediums commonly used for the isolation of *M. gallisepticum* are a chicken infusion (3) and beef heart infusion (4). Recently (1) the latter medium was supplemented with swine serum instead of horse serum and additional nutrients including diphosphopyridine nucleotide (DPN) were added.

The purpose of the present note is to report the evaluation of the efficiency of these three mediums in the isolation of *M. gallisepticum* from the exudate of intranasally infected turkeys.

Materials and Methods

The reference medium was PPLO broth (Difco) enriched with 10% horse serum and 1% yeast autolysate. The chicken infusion medium was prepared in accord with the method of Hofstad (3). The third medium was a modification of Chalquest's medium (2) described by Olson (5).

Six turkeys were infected intranasally with *M. gallisepticum* (S6 strain). One month following exposure, the birds were necropsied and attempts were made to isolate the organism from the tracheal and sinus exudate. Only four birds developed sinusitis and two tracheitis. These birds were used for this study. Exudate was diluted approximately 1:10 in tryptose broth before seeding into broths or on agar. One drop of the diluted exudate was placed on agar or in the enrichment broth. The Petri dishes were sealed with masking tape and broths and agar plates were incubated at 38°C.

Results and Discussion

The most rapid growth was observed in the chicken infusion broth. Equally

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good growth was seen on agar using either the Chalquest or Hofstad medium. No growth was observed on heart infusion agar seeded with exudate. These data are illustrated in Table 1.

Table 1- Isolation of *M. gallisepticum* from the sinus exudate in various media of turkeys infected with *M. gallisepticum*

Material	Bird No	Media																	
		Chalquest						Hofstad						Standard					
		Hours						Hours						Hours					
		24	36	48	60	72	84	24	36	48	60	72	84	24	36	48	60	72	84
Sinus Exudate	978	-	-	A	A	AB	AB	B	B	B	AB	AB	AB	-	-	B	B	B	B
"	980	-	-	B	AB	AB	AB	B	B	B	AB	AB	AB	-	-	B	B	B	B
"	981	-	-	-	-	A	AB	-	B	B	B	AB	AB	-	-	B	B	B	B
"	983	-	-	-	A	A	AB	-	-	B	B	AB	AB	-	-	B	B	B	B
Tracheal Exudate	976	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
"	979	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

A = Growth in Agar Medium B = Growth in Broth Medium - = No growth

Apparently for direct isolation of *M. gallisepticum* from exudate there is an advantage to the use of the complex mediums of Chalquest or Hofstad. Possibly if other strains of *M. gallisepticum* were used these differences would become more marked. The medium described by Hofstad is difficult to prepare and this factor may limit its use. Chalquest medium (as modified by Olson) is expensive. Further research is needed on the development of a suitable procedure for the isolation of *M. gallisepticum*.

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