

nonsporulating anaerobes from clinical material with PEA-blood-agar is comparable to that obtained with conventional blood-agar.

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## DISCREPANT TESTS FOR HYDROGEN SULFIDE

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Kligler and Triple Sugar Iron (TSI) media have been considered to be interchangeable for the purpose of detecting hydrogen sulfide production in the family Enterobacteriaceae. Contrary evidence is presented in this report. From various sources, 11 cultures were isolated which yielded a positive hydrogen sulfide reaction on Kligler medium and a negative reaction on TSI. Biochemically, these cultures appear to belong to the *Citrobacter* group. In Kligler medium, these cultures react like the *Salmonella* and Arizona groups. On TSI medium, the reactions resemble the coliform group. Therefore, the classification of these cultures depends on which of the two media is employed.

The chief difference between the media is the presence of sucrose in TSI medium. Presumably, other differences in the formulas are not significant. All 11 cultures ferment sucrose, but not lactose, promptly. Therefore, the utilization of sucrose appears to be responsible for the discrepancy. The acid products of sucrose fermentation may suppress the enzyme mechanism which forms hydrogen sulfide. To test this, lead acetate strips were placed in the tops of TSI cultures.

Blackening of the strips indicated that hydrogen sulfide gas was being produced, although no blackening developed in the butts. Therefore, it appears that the iron sulfide indicator in the medium has been masked.

Since many strains of *Proteus vulgaris* ferment sucrose and produce hydrogen sulfide, it seemed desirable to determine whether these cultures would yield the same results as the 11 *Citrobacter* cultures. The two media were inoculated with 18 strains of *P. vulgaris*. Blackening occurred in both media, although it was visibly more intense in Kligler medium. It was observed that, when these cultures were incubated several days longer, the iron sulfide disappeared gradually until all was gone, from TSI medium but not from Kligler medium. When the *Proteus* and *Citrobacter* cultures were inoculated into sucrose Purple Broth Base, acid production was evident in all of the cultures in a few hours. Therefore, the rate of utilization of sucrose did not account for the negative hydrogen sulfide tests.

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## COMPARATIVE SUSCEPTIBILITY OF NEW ZEALAND ALBINO AND DUTCH RABBITS TO EXPERIMENTAL COCCIDIOIDOMYCOSIS

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Brosbe, Kietzman, and Kurnick (J. Bacteriol. **88**:233, 1964) found a difference in susceptibility of New Zealand albino and Dutch rabbits to experimental coccidiodomycosis when inoculated with *Coccidioides immitis*,

strains CI-5 and Silveira, respectively. The following experiment was designed to determine whether the difference was due to the rabbit or fungus strain.

Six animals of each breed were inoculated

TABLE 1. Complement fixation titers and gross autopsy findings of New Zealand albino and Dutch rabbits inoculated intravenously with 6,500 viable units of *Coccidioides immitis* strain Silveira

Breed	Rabbit no.	Complement fixation titer <sup>a</sup>				Time of death (weeks postinfection)	Macroscopic disease <sup>b</sup>	
		At 6 weeks	At 8 weeks	At 10 weeks	At death <sup>c</sup>		Lungs	Extra- pul- monary
New Zealand al- bino	R11-1				32	5 <sup>d</sup>	+	0
	R11-2	1,024	2,048	4,096	4,096	11.5	++	0 <sup>e</sup>
	R11-3	1,024	1,024	1,024	1,024	10	++	+
	R11-4	512	1,024	2,048	2,048	18	+	0 <sup>e</sup>
	R11-5	1,024	1,024	4,096	2,048	12.5	++	+
	R11-6	512	1,024	2,048	1,024	24	± <sup>e</sup>	+
Dutch	R11-7	512	1,024	2,048	2,048	18	++	+
	R11-8	128	512	256	512	20.5	+	0
	R11-9	2,048	4,096	2,048	2,048	14	++	0 <sup>e</sup>
	R11-10	512	1,024	512	1,024	21.5	++	0 <sup>e</sup>
	R11-11	2,048	4,096	2,048	1,024	26	0 <sup>e</sup>	0 <sup>e</sup>
	R11-12	2,048	2,048	2,048	1,024	26(S) <sup>f</sup>	0	0

<sup>a</sup> Reciprocal of the highest dilution of serum showing a 3+ or greater fixation of complement. Maximal titer is in italics.

<sup>b</sup> Extent of macroscopic disease was estimated as follows: 0, no gross disease; ±, gross appearance abnormal but no definite lesions; +, 1 to 10 discrete lesions; ++, 10 or more discrete lesions.

<sup>c</sup> Within 2 weeks or less of time of death.

<sup>d</sup> Accidental death.

<sup>e</sup> *C. immitis* recovered on culture of tissue homogenate.

<sup>f</sup> S = sacrificed at 26 weeks.

intravenously with 6,500 viable units of *C. immitis* strain Silveira. The 1-ml inoculum was prepared and given in a manner previously described (Brosbe et al., J. Bacteriol. **88**:233, 1964). Mycological, pathological, and serological procedures have been described (Brosbe et al., J. Bacteriol. **88**:233, 1964).

Although the individual response was some-

what variable within the same breed, the results of complement fixation titers, mortality, and extent of disease demonstrated grossly or by culture, or both (Table 1), indicate that New Zealand albino and Dutch rabbits do not differ greatly in their susceptibility to coccidioidomycosis induced by the Silveira strain of *C. immitis*.

## PASTEURELLA SP. FROM AN EPIZOOTIC OF WHITE PERCH (*ROCCUS AMERICANUS*) IN CHESAPEAKE BAY TIDEWATER AREAS

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Massive fish kills occur frequently for numerous reasons. Whenever a fish kill is of long duration, spreading from one area to another, and species-specific, it is usually caused by an infective

agent. Such was the epizootic of white perch in the Chesapeake Bay in summer of 1963.

On the basis of available records, the epizootic started in late June in the Potomac estuary