

SESSIONAL PAPER No. 38a

SUMMARY OF CHARACTERS.

	Diam. over 1 m.	Chains.	Spores.	Capsules.	Motile.	Gram.	Broth.					Agar.		C. i. Plate.	Potato.		Milk.				Gas in Gluc. Agar.				
							Cloudy.	Ring.	Pellicle.	Sediment.	Shiny.	Dull.	Chrysa.		Round.	Liquef.	Mod.	Colour.	Grows at 37° C	Acid curd.		Reacts curd.	Casain pep.	Gas.	Indol.
A 1.....	-	+	-	-	+	-	+	+	-	+	+	-	-	+	+	+	+	+	+	-	-	-	+	-	+
A 2.....	-	+	-	-	+	-	+	+	-	+	+	-	-	+	+	+	+	+	+	-	-	-	+	-	+
A 3.....	-	+	-	-	+	-	+	+	-	+	+	-	-	+	+	+	+	+	+	-	-	-	+	-	+
A 4.....	-	+	-	-	+	-	+	+	-	+	+	-	-	+	+	+	+	+	+	-	-	-	+	-	+
B 2.....	-	+	-	-	+	-	+	+	-	+	+	-	-	+	+	+	+	+	+	-	-	-	+	-	+
C 1.....	-	+	-	-	+	-	+	+	-	+	+	-	-	+	+	+	+	+	+	-	-	-	+	-	+
D 1.....	-	+	-	-	+	-	+	+	-	+	+	-	-	+	+	+	+	+	+	-	-	-	+	-	+
F 1.....	-	+	-	-	+	-	+	+	-	+	+	-	-	+	+	+	+	+	+	-	-	-	+	-	+
G 1.....	-	+	-	-	+	-	+	+	-	+	+	-	-	+	+	+	+	+	+	-	-	-	+	-	+
H 1.....	-	+	-	-	+	-	+	+	-	+	+	-	-	+	+	+	+	+	+	-	-	-	+	-	+
B Salmonis pestis.	?	+	-	-	+	-	+	+	+	+	+	-	-	+	+	+	+	+	+	-	-	-	+	-	+

CHARACTERISTICS OF THE MICRO-ORGANISM (*Bacillus salmonis pestis* Patterson).*Morphological Characters.*

A short, thick bacillus with rounded ends, varying in length, occurring singly and in pairs lying end to end. Actively motile, non-spore-bearing, does not stain with Gram's method, grows rapidly and profusely at the room temperature, but shows little or no growth at 37° C., and is killed at this temperature in about six days.

The organism exposed to a mixture of ice and salt for a week not only survived that low temperature, but grew profusely while in the mixture. Involution forms were only observed in glucose media. It appears to be a strict aerobe. Pathogenic to fish, non-pathogenic to frogs, mice, and guinea-pigs.

Cultures.—Room Temperature.

Gelatine Plates.—In about three days small, greyish, pin-point colonies appear, with a ring of liquefaction around them of a transparent greyish colour, which rapidly increases, the plate becoming completely liquefied in about 36 hours after their appearance. The dense pin-point centre and transparent area of liquefaction around is markedly characteristic of the bacillus, together with the very rapid liquefaction of the gelatine.

Gelatine Stab.—Profuse growth along needle track at the end of 18 hours, which gradually increases and rapidly liquefies the gelatine.

Carbol Gelatine, 1 per cent Stab.—Slight growth in 18 hours along needle track, which gradually liquefies the gelatine.

Carbol Gelatine, .05 per cent Stab.—The growth is more profuse.

Carbol Gelatine, .03 per cent, Stab.—Very profuse growth.