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Classification of the Organisms Important in Dairy Products

III. *Pseudomonas putrefaciens*

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SUMMARY

A special gelatin agar containing an iron salt is very useful in the isolation of *Ps. putrefaciens* because of the luxuriant growth and high color production with it. Even on this medium, however, isolated cells may not initiate growth readily. With certain materials enrichment in litmus milk at 3°C., followed by smearing on the special medium, aids in isolating the organism, while with other materials direct smears are more frequently successful. In attempting isolations from butter, the serum is more satisfactory than the butter itself, and enrichment in laboratory churnings of butter (as well as in litmus milk) held at 3°C. may be helpful.

Ps. putrefaciens is widely distributed in certain dairy products, in water (streams, lakes, roadside pools, creamery supplies, etc.), on dairy plant floors, in dairy plant sewers and in dairy plant equipment.

Ps. putrefaciens is rather easily destroyed by heat, acid and salt. In butter the distribution of the salt, as well as the total content, is important from the standpoint of preventing growth of the organism.

There are variations between cultures of *Ps. putrefaciens*, but these do not appear to justify varietal designations.

The outstanding characters of *Ps. putrefaciens* from the standpoint of identification are action on litmus milk, morphology, phosphatase production and action on butter.