

SCIENTIFIC PROCEEDINGS

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On the presence of a fat-soluble substance in purified casein.

By CASIMIR FUNK.

[*From the Research Laboratory of H. A. Metz, New York City.*]

A sample of casein, purified by three reprecipitations and extraction with alcohol and ether in the cold, yields on extraction with boiling alcohol and cooling a fat-like substance, which attracted our attention. The crystals obtained proved to be free from nitrogen, melted at 52° and gave no cholesterol reactions. On treatment with boiling alcoholic potash the substance was incompletely saponifiable. Various samples of well purified casein gave 0.5-1 per cent. of this material, whereas A-free casein Harris failed us so far in this respect.

The question whether the presence of this fat-like product fed along with the casein, plays a rôle in nutrition experiments, is being taken up in a series of experiments. It follows from the above data, that casein cannot be completely freed from lipins by extraction in cold with alcohol and ether and that the method of purification adopted by the present writer with Macallum (repeated boiling out with alcohol) is probably the most suitable one to use in preparing casein for feeding experiments.