with ether will remove the soluble indol, skatol, indolacetic and indolpropionic acids from the ether insoluble tryptophane. A further separation may be effected by steam distillation of the ether extract: indol and skatol being carried over in the steam whereas indolacetic and indolpropionic acids remain behind. The individuals of these pairs can be distinguished from each other as, fortunately, they give different reactions with the colorimetric reagents employed.

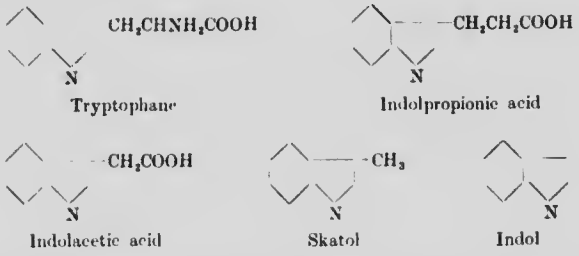
Two synthetic media were employed, the one A containing the necessary nutrient salts, 1 % of gelatine and 0·15 % of tryptophane, the other B containing in addition 1 % of glucose.

After sterilisation the tubes containing the media were inoculated with as many strains of aerobic organisms as were available and the various indol products were tested for colorimetrically.

It was noticed that where growth took place it was more luxuriant in the medium A than in the medium B: in fact in several cases while there was growth in A there was none in B.

It was also observed that the indol or indolacetic acid production by the various organisms was greater in A than in B. This phenomenon may be due to one of two causes: either that the organisms find it easier to derive their energy from the decomposition of glucose than of tryptophane, or else that the glucose by chemically reacting with tryptophane produces a substance or substances not so readily useful as is tryptophane for bacterial metabolism.

The chemical reactions involved in the formation of indol, skatol, indolpropionic and indolacetic acids from tryptophane necessitate the preliminary removal of the *amino* (NH_2-) group from the side chain of the molecule thus:



Now, it has been shown that the *amino* group of tryptophane will readily react at body temperature with the *carbonyl* group of an aldehyde or of a ketone to form colourless compounds of the type: