CLXXV. NOTE ON THE INDUCED FLUORESCENCE OF ERGOSTEROL.

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A BRILLIANT blue fluorescence is observed when ergosterol is exposed to a source of ultra-violet rays (mercury vapour lamp) from which the visible rays are screened off by "Wood's glass" and a screen of bromine vapour. Eight specimens of different origin were examined, four of which had been prepared from ergot and four from yeast. Under the same conditions pure cholesterol, freed from ergosterol by bromine, showed no fluorescence. The phenomenon stands in no relationship, however, to the formation of vitamin D from ergosterol by ultra-violet irradiation. It has been found that under certain conditions preparations of non-fluorescent ergosterol can be obtained, which are rendered as highly antirachitic by irradiation as the fluorescent ones. Moreover, a specimen of cholesterol which could not be activated and was free from ergosterol, as shown by the spectroscopic test, possessed a strong blue fluorescence. This was traced to a previous treatment with charcoal (norite) during recrystallisation from alcohol, and a similar treatment induced fluorescence in non-fluorescent ergosterol. Since the same result is also produced by repeatedly recrystallising non-fluorescent ergosterol from ordinary ether, kept in light and containing peroxides, the conclusion seems justified that the fluorescence of sterols under the above conditions is due to the formation of traces of oxidation products.