

**INVESTIGATION OF THE MOULD FLORA IN
DRIED CEREALS**

by

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ABSTRACT

The growth of microorganisms in foods is controlled by many factors including pH, nutrient content, temperature and the presence of other microbes, but the most important parameter in dry cereals is water activity (a_w) since dried cereals have a_w .85 or below. This study examined the presence of moulds in the cereals because of the outstanding ability of the moulds to survive low a_w conditions compared to other microbes. In deed moulds can tolerate extremes of all the growth parameters to a greater extent than the other microorganisms. It is the Xerophilic fungi that cause much of the spoilage in stored cereals since bacteria, is present, can not multiply under such conditions. The study investigated the presence of moulds in the cereals by culturing in Potato Dextrose Agar (PDA) which incooperated an antibiotic to suppress growth of bacteria. In general high counts were obtained in all cases with the highest counts recorded in wheat flour. Isolates were prepared from these cultures to characterise the moulds by microscopic examinations. Penicillium was found to be the most prevalent. On the whole this study showed a relationship between the a_w and the mould count and between the number of isolates and a_w in each sample examined.

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