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UV transmission through various clear films in mutation experiments

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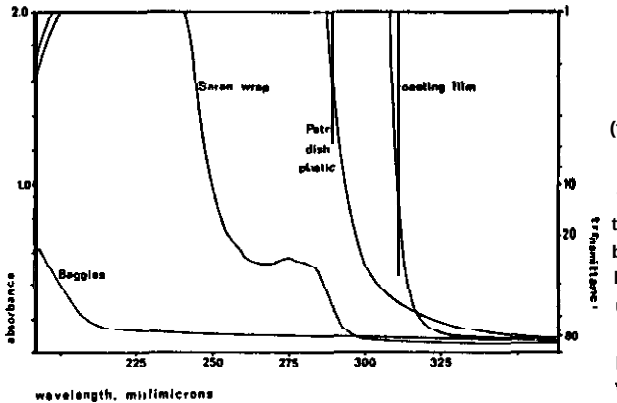
Abstract

Clear films for UV mutation experiments

Griffiths, A. J. F. and S. Sivak. UV transmission through various clear films in mutation experiments.



To reduce the risk of contamination in long, or student-operated UV exposures, it is desirable to use some form of cover on the irradiated sample. Traditionally quartz has been used for this purpose. This report indicates that some cheaper materials are just as good. The materials tested were: plastic Petri plates (from a/s Nokra plast, DK 4690, Naslev, Denmark); "Saran Wrap" (from Dow Chemicals, Ltd., 122 Arrow Road, Weston, Ontario); "Look Roasting Film" (from Look Film Associates, Scarborough, Ontario); and "Baggies" (from Colgate-Palmolive Co., Ltd., New York, N. Y.).

Strip of the clear materials from various sources were fitted into the sample cuvette of a Unicorn SP-800 UV spectrophotometer, so that the beam passed at right angles through one thickness. The behavior of the various films is shown in the Figure, in which the base line follows the 100% transmittance line. Most of the commonly-used UV tubes (e.g., Hanovia BBA-45, Osram HNS 12) emit at 254 millimicrons. It can be seen that of those materials tested, Baggies provide the only material which will transmit most radiation of this wavelength.

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