seemed capable of taking up color. The mycelia, however, in general showed less tendency to take up color. The depth of color and the number of elements colored varied with the growth. A more uni form tinting was present in some of the more mycelial growths. In most cases granules, vacuoles and refractile rims were very apparent. There were no indications that the more deeply colored elements lacked viability. Both eosins gave good results.

It is felt that the dye media used are of value in differentiation and that the added expense of this type of vital staining is compensated for by the greater distinctness of appearances.

7490 C

Growth of Certain Pathogenic Fungi on Asparagin Medium.

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Since asparagin is used frequently as a substitute for peptone, it was substituted in the following observations and the differential characteristics of the organisms planted were observed.

The media used differed in that a portion contained 1% dextrose while another portion did not. The constituents were: Asparagin 10 gm., dextrose 10 gm., $MgSO_4.7H_2O$ 0.4 gm., NaCl 2.0 gm., KH_2PO_4 6.0 gm., K_2HPO_4 1.0 gm., agar 1.5 gm., distilled water 1000 cc.

The salts as used resulted in a pH of 5.5. A control medium of 4% peptone, 1% dextrose and 1½% agar was planted.

The following pathogenic fungi and 2 saprophytes, *Lichtheimia sp.* and *Scopulariopsis brevicaulis* were observed: *Achorion schoenleini, Acladium castellani, Candida candida, Endodermophyton tropicale, Endomyces capsulatus, Endomyces dermatitidus, Epidermophyton inguinale, Glenospora gammeli, Geotrichum bachmann, Indiella americana, Monosporum apiospermum, Microsporon audouini, Monilia albicans, Oöspora humi, Trichophyton crateriforme, Trichophyton granulosum, Trichophyton interdigitale, Trichophyton japonicum, Willia anomala.* Observations were made over 30 days. The tubes were kept at room temperature.

The table gives the number of days within which growth occurred. One plus indicates a scant growth, 2, 3, 4 plus successively

larger growth, and 5 plus the entire slant covered; v plus indicates very scant, a growth which we have been able to duplicate on plain agar. In no instance were the control growths less than 4 plus nor was their appearance delayed more than 4 days. There was slightly greater growth on the asparagin dextrose than on the control medium with *Endomyces capsulatus, Glenospora gammeli, Monosporum apiospermum.* A frosted appearance occurred on the control medium as stated in previous papers[1, 2] with *Endomyces capsulatus, Endomyces dermatitidus, Glenospora gammeli, Indiella americana, Microsporon apiospermum* and on the asparagin dextrose medium with *Endomyces dermatitidus.*

TABLE I.

Organism	Asparagin	Asparagin dextrose
Achorion schoenleinii	8 +	8 ++
Acladium castellani	4 +	4 ++++
Candida candida	4 ++	4 +++
Endodermophyton tropicale	15 +	15 +
Endomyces capsulatus	15 +	8 +++++
Endomyces dermatitidus	15 v +	8 +++++
Epidermophyton inguinale	11 +	8 ++++
Glenospora gammeli	11 +++	6 +++++
Geotrichum bachmann	6 +++	4 +++++
Indiella americana	11 v +	6 +
Lichtheimia sp.	11 v +	11 v +
Monosporum apiospermum	8 +++	4 +++++
Microsporon audouini	8 ++	8 +++
Monilia albicans	4 ++	4 ++
Oöspora humi	4 +	4 ++++
Scopulariopsis brevicaulis	4 +++	4 +++++
Trichophyton crateriforme	8 +	4 +++
Trichophyton granulosum	4 +++	4 +++++
Trichophyton interdigitale	15 +++	4 +++++
Trichophyton japonicum	11 +	4 ++
Willia anomala	4 ++	4 ++++

The type of growth on the asparagin medium varied from that of the control medium in many instances; with *Achorion schoenleinii,* that on asparagin dextrose was finer and more dendritic; with *Acladium castellani,* that on both asparagin media more discreet; with *Candida candida,* subsurface mycelia were marked on both asparagin media; with *Geotrichum bachmann,* the growth on asparagin appeared glassy; with *Indiella americana,* there were subsurface mycelia; with *Trichophyton crateriforme* on asparagin the growths were discreet. In general, where there was any considerable growth the mycelia were more compact and whiter. The difference in amount of growth is apparent from the table.

[1] Williams, J. W., PROC. SOC. EXP. BIOL. AND MED., 1934, **31**, 1173.

[2] Williams, J. W., PROC. SOC. EXP. BIOL. AND MED., 1934, **31**, 1174.