The same colour reactions characteristic of reserpine and rescinnamine were given by the four crystals: with Froehde's reagent, yellow-green to blue; with concentrated sulfuric acid, slightly greenish yellow and with concentrated nitric acid, brick red turning to greenish yellow solution.

Elementary analysis yielded the following results:

Crystal 1: C 64·76, H 6·71, N 4·81
Crystal 2: C 65·30, H 6·78, N 4·08
Crystal 3: C 65·88, H 6·83, N 4·61

Crystals 1 and 2 were identified by comparison on a paper chromatogram with pure reserpine and by their ultraviolet (Fig. 5, 6) and infrared absorption spectra (Fig. 7, 8, 9). Crystals 3 and 4 were identified by paper chromatography to be mixtures of reserpine and rescinnamine. Quantitative analysis showed crystals 1 and 2 to be 99% reserpine, crystal 3 is 90% reserpine and 10% rescinnamine and crystal 4 contains 95% reserpine and 5% rescinnamine.

The elementary analyses were made by Misses LYDIA JOSON and GLORY LLEANDER, NSDB, and the UV- and IR-spectra by J. CAROL and staff, FDA, Washington.

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Zusammenfassung

Aus *Rauwolfia amsoniaefolia* A. DC. wurden ziemlich reines Reserpin und ein Gemisch von Reserpin und Rescinnamin isoliert und charakterisiert.

Note on the Specificity of Mercuric Bromophenol Blue for the Cytochemical Detection of Proteins

Quite recently BAKER[1] has expressed some doubts on the specificity of bromophenol blue (BPB) as a protein stain. He seems to be of the opinion that whatever is stained by bromophenol blue does not necessarily contain proteins, and hence this fact does not qualify this stain to act as a reliable agent for the detection of proteins.

The purpose of this communication is to emphasize that, in addition to what BAKER[1] has observed, whatever is not stained with this dye is not always devoid of proteins.

The credit of bringing this powerful acid dye to the forefront as a specific stain for various proteins goes to MAZIA, BREWER, and ALFERT[2], who modified the older techniques employed by DURRUM[3], KUNKEL, and TISELIUS[4] and GESCHWIND and LI[5] and standardized a new technique.

I have studied in detail the mucinogenesis in the goblet cells of different vertebrates [viz., *Mystus seenghala* (fish), *Rana tigrina* (amphibian), *Hemidactylus* sp. (reptile), and the house- and white rats (mammals)]. The mucus which these cells secrete has been established histochemically as acid mucopolysaccharides (see also PEARSE[6] and PALAY[7]) as is evident from the following reactions (PAS +, Best's carmine –, Alcian blue[8] +, mucicarmine +, SBB –, intensely metachromatic after Feyrter's 'enclosure' method[6], and toluidine blue[6] etc. etc.). Further, mucopolysaccharides and acid mucopolysaccharides invariably contain proteins (+ after coupled tetrazonium[9]) as one of their constituents (PEARSE[6] and LILLIE[10]).

During the present investigations, mercuric bromophenol blue staining has been employed both on paraffin sections from the various fixatives such as Regaud, Lewitsky, Lewitsky saline[11], Champy, Helly, Zenker-formol, Zenker and Carnoy (both with and without chloroform) and gelatin sections from formaldehyde calcium[12], Lewitsky saline[11], and pyridine extracted (prior fixation in weak Bouin) material[13]. In none of the above preparations does the mucus in the thecae of the goblet cells give blue coloration with mercuric bromophenol blue technique of MAZIA, BREWER, and ALFERT[2].

So in the present state of knowledge, as BAKER[1] has also pointed out, it is safe to regard bromophenol blue merely as a 'powerful acid dye, capable of making direct links with basic groups in tissue-constituents' and perhaps also with certain acidic groups, through mercury.

In short, whatever is stained with mercuric bromophenol blue does not always contain proteins and whatever is not stained is not necessarily devoid of proteins.

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Résumé

Le bromophénol mercurique bleu n'est pas un colorant spécifique des protéines. Tout ce qui est teint par lui ne contient pas toujours des protéines et tout ce qui n'est pas teint n'est pas nécessairement dépourvu de protéines.

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Enzymatische Hydrierungen im Ring A von Steroiden mittels Streptomyzeten[1–3]

Die Fähigkeit, Steroide im Ring A enzymatisch zu dehydrieren, ist unter den Mikroorganismen ziemlich verbreitet[4]. Die umgekehrte Reaktion hingegen, die Hydrierung von Δ^4-3-Keto-steroiden zu den entsprechenden im

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