gen chloride[4]. This was converted into 2-phenylcoumarone-3-carboxylic acid (IV, m.p. 195°; amide, m.p. 261°) by aluminium chloride in benzene. This was followed by homologation by ARNDT-EISTERT procedure to 2-phenylcoumarone-3-acetic acid (m.p. 142–143°; *p*-toluidide, m.p. 209°) which underwent cyclization in quantitative yield to 5-hydroxy-α-brazan (m.p. 204 to 205°) with phosphoric anhydride in benzene[5]. On oxidation with chromic acid in acetic acid, this α-naphthol gave a mixture of quinones from which (II, m.p. 250 to 253°) was isolated on treatment with *o*-phenylenediamine. Reduction of the hydroxy brazan with boiling hydriodic acid gave α-brazan (m.p. 102–103°) identical with an authentic specimen.

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Résumé

On décrit une methode pour la synthèse des α-brazan et α-brazanquinone de KRUBER.

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Nucleoside Decomposition by Bacterial Cells

Partially purified nucleosidases extracted from microbial cells have been described by several investigators[1]. Two modes of action have been postulated: phosphorolysis[2] and hydrolysis[3], yielding base and ribose-1-phosphate and base and ribose respectively as the products of nucleoside decomposition.

In the present study, an attempt was made to confirm these findings with living bacteria by comparing the rates of breakdown of ribose, barium ribose-1-phosphate, barium ribose-5-phosphate, 3 ribosides and their free bases by resting cells of *Escherichia coli*, *Proteus vulgaris*, and *Micrococcus pyogenes* var. *aureus*. Ribose-5-phosphate was included because its formation from ribose-1-phosphate has been reported by ABRAMS and KLENOW[4]. The substrates were added in 0·5 micromole quantities and exposed to bacterial action at 37°C and pH 7 for 15 min in the presence of 2,3,5-triphenyltetrazolium chloride (TTC). The amount of TTC reduced to red formazan was used as a measure of terminal respiratory changes instead of the more commonly employed determinations of oxygen uptake or methylene blue reduction. The method has been described elsewhere[5]. The values presented in the accompanying Table are adjusted for endogenous reducing activity. The latter was not increased in the presence of the free bases tested.

Substrate	Amount of TTC reduced in γ		
	E. coli	*P. vulgaris*	*M. pyogenes* var. *aureus*
Ribose	37	21	199
Ba ribose-1-phosphate	39	31	100
Ba ribose-5-phosphate	19	19	38
Adenosine	112	235	173
Guanosine	136	155	114
Uridine	90	145	266

While differences in the rates of decomposition of nucleosides are presumably due to the specificity of the enzymes involved, the discrepancy in the rates of breakdown of ribose and its phosphoric esters, on the one hand, and ribosides, on the other, cannot be explained on this basis. It was observed with 12 more bacterial species tested. The only apparent exception was the strain of *M. pyogenes* listed. However, this organism could be shown to be a vigorous ribose fermenter but weak phosphatase producer.

ROTHSTEIN and MEIER[6] postulated that yeast cell walls were impermeable to phosphoric esters. The uptake of such compounds by yeast was almost completely inhibited in the presence of sodium molybdate, which inactivated cell surface phosphatases. With the 3 organisms under study, no change in the amount of TTC reduced was observed when 2×10^{-4} M sodium molybdate was added to reaction mixtures of bacteria, TTC, and ribose phosphates. In view of the results reported, the sequence of events in the metabolic breakdown of nucleosides by living bacterial cells would seem to require further clarification.

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Zusammenfassung

Ruhende Zellen verschiedener bakterieller Arten zersetzen Nukleoside mit viel grösserer Geschwindigkeit als Ribose und ihre phosphorischen Ester. Phosphatasen der Zellenoberfläche scheinen in den untersuchten Bakterien keine Rolle im Substrattransport in die Zelle zu spielen. Die Stufen im Abbau der Nukleoside durch lebende Bakterien müssen darum noch weiter aufgeklärt werden.

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Über physiologische, durch einen Gehalt an verschiedenen Alkaloiden charakterisierte Rassen von *Sedum acre* L.

Aus in Kanada gesammelten blühenden Pflanzen von *Sedum acre* L., dem scharfen Mauerpfeffer, hat MARION[1] ein bei 89° schmelzendes Alkaloid der Summenformel $C_{14}H_{21}ON$ isoliert, das dem Schmelzpunkt nach offenbar identisch ist mit dem von KOLESNIKOV und SHVARTSMAN[2] aus der gleichen Pflanze gewonnenen *Sedamin*, für

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