Table 1

Wave-lengths A.* of the Po sample	Intensity	Interpretation
3825	Weak	O II (3330, 3822); O (3825, 3824)
3850	,,	O II (3851, 3848); O II (3857, 3856, 3843); N (3857)
3945	Medium	O II (3945); O I (3948, 3947); N (3940)
4030	Weak	N (4026, 4035)
4065	,,	O II (4070, 4072); L (4063)
4085	Medium	O II (4085, 4093, 4089, 4079, 4076)
4225	Weak	O (4223); L (4229); N (4228)
4295	Very strong	O II (4295, 4304)
4370	Medium	O II (4378, 4369, 4367); O I (4368); air (4371)
4510	Weak	Air, N (4508)
4585	,,	Air, O II (4591)
4680	,,	Air, O II (4676); air, N II (4675); O II (4674)
4720	,,	Air (4718); O II (4710)
5015	,,	O I (5019); N II (5011); N (5016)
5445	,,	O I (5437)

* The accuracy of the values will not be better than 10 A., due to the low dispersion of the spectrograph.

The surface of the sample of polonium showed quite black; it is certainly oxidized due to the intensive α-radiation. The lines, obviously emitted mainly from the singly ionized oxygen atom, are to be attributed probably to oxygen bound to polonium atoms. This seems to be shown by the spectrogram taken in position (2) of the polonium. The spectrogram showed only a somewhat stronger line at 4300 A., corresponding probably to the strong line at 4295 A. measured on the position (1) plate. Furthermore, indications of lines were detected at 3850 and 3445 A.

The ranges of wave-lengths of the continuous bands measured on the spectrogram taken in position (2) are shown in Table 2.

Table 2

Wave-length ranges of bands (A.)	Intensities	Wave-length ranges of bands (A.)	Intensities
3730–3790	Weak	4135–4225	Very weak
3790–3860	Medium	4225–4410	Very strong
3860–3890	Weak	4660–4750	Weak
3890–4105	Strong	5085–6000	Increasing with the wave-length
4105–4135	Medium		

The bands found on the spectrogram in position (1) seem to cover essentially the same ranges as in position (2).

It seems to be feasible to obtain spectrograms in a reasonable time also by a spectrometer of a higher dispersion, for example, the Hilger quartz spectrometer ($f/4$), using a stronger polonium sample of a more suitable shape. Unfortunately, we cannot obtain such a source and therefore we publish these preliminary results.

Finally, we express our sincere thanks to Prof. Madwar Bey, director of the Observatory in Helwan (Egypt), for allowing us to use the night-sky spectroscope.

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[1] McLennan and Ireton, *Proc. Roy. Soc.*, A, **129**, 31 (1930).
[2] Kayser, H., "Tabelle der Hauptlinien der Linienspektren aller Elemente" (Berlin, 1926).

Observations on the Connexion between Intermedin and Adrenocorticotropic Hormone

In a communication which has recently appeared under the above title, Johnsson and Högberg[1] have claimed that intermedin and adrenocorticotropic hormone (ACTH) are closely related or identical. Moreover, they have suggested that the assay for melanophore-expansion activity in the frog is "a rapid and simple method of testing for adrenocorticotropic hormone". Similar conclusions have been arrived at independently by Sulman[2]. Experimental evidence which we have obtained relating to this question does not support these claims.

A number of preparations of sheep adrenocorticotropic hormone[3], having activities of from 30 to 100 U.S.P. units/mgm. as based upon the adrenal ascorbic acid – depleting activity[4], have also been assayed for melanophore-expansion potency using hypophysectomized *Rana pipiens*. No positive correlation was observed between the two tests. In addition, activation of intermedin activity by treatment with 0·1 *N* sodium hydroxide at 100° for five minutes[5] has been found to decrease the ascorbic acid – depleting activity to one-twentieth of its original value. Furthermore, separation of intermedin and adrenocorticotropic hormone has been achieved by the use of a discontinuous *p*H gradient on oxycellulose[6] and by zone electrophoresis on paper[7].

A rather surprising result was obtained when anterior and intermediate lobes of frog pituitary were assayed for each activity; although melanophore-expansion potency in the pars intermedia was thirty times greater than that in the pars distalis, the adrenocorticotropic hormone activity in the pars intermedia was about one-half that of the anterior lobe.

Details of this work will be published elsewhere.

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[1] Johnsson, S., and Högberg, B., *Nature*, **169**, 286 (1952).
[2] Sulman, F. G., *Refuah Veter.* (Israel), **9**, 31 (1952); *Nature*, **169**, 588 (1952).
[3] Li, C. H., *J. Amer. Chem. Soc.*, **74**, 2124 (1952).
[4] Sayers, M. A., Sayers, G., and Woodbury, L. A., *Endocrin.*, **42**, 379 (1948).
[5] Stehle, R. L., *J. Pharmacol. Exp. Therap.*, **57**, 1 (1936).
[6] Geschwind, I. I., Porath, J. O., and Li, C. H., *J. Amer. Chem. Soc.*, **74**, 2121 (1952).
[7] Kunkel, H. G., and Tisclius, A., *J. Gen. Physiol.*, **35**, 118 (1951).

A New Galactose-containing Compound from Mammary Glands

During the study of the carbohydrates of the mammary gland, a polysaccharide-like compound which contains glucose and galactose has been found. As it may be of importance in the long-sought mechanism of synthesis of lactose by this gland, it was decided to report its finding while its purification and the study of its structure are being pursued.

The mammary glands of rats during the lactation period were extracted in a blender with 10 volumes of 5 per cent trichloracetic acid. After the acid was eliminated with ether and the extract neutralized and concentrated, the sugars were submitted to