

FLAVONOIDS OF THE HERB *Senecio platyphylloides*

D. A. Murav'eva, V. S. Batuk,
and G. P. Chernova

UDC 547.972.95

In a study of *Senecio platyphylloides* Somm. for the presence of biologically active substances accompanying the alkaloids platyphylline and seneciphylline, we have found substances of polyphenolic nature.

The extraction of the herb, previously purified with chloroform, with 70% ethanol yielded the total polyphenolic compounds which contained, according to paper chromatography, not less than seven substances of polyphenolic nature, three of which were of the flavonoid type. By separating the combined flavonoids on a column of polyamide sorbent with elution with ethanol-water and ethanol-chloroform mixtures, we obtained three individual substances of flavonoid nature. On reduction with magnesium in hydrochloric acid they gave bright red colorations. When octanol was added to the reaction mixtures of all three substances, the reaction products of only one of them passed into the alcohol, which shows the aglycone nature of this compound and the glycosidic nature of the other two.

The IR spectrum of the first compound coincided completely with that of quercetin; no depression of the melting point was observed when it was mixed with an authentic sample of the latter. The second substance was identified as rutin from the products of its hydrolysis, its UV and IR spectral characteristics, the results of a comparative chromatographic investigation, and a mixed melting point with an authentic sample.

Thus, it has been established that in the herb *Senecio platyphylloides* in the phase of the harvesting of the industrial raw material rutin and quercetin exist simultaneously. This is the first time that these substances have been isolated from this species of *Senecio*.

LITERATURE CITED

1. V. I. Litvinenko, N. P. Maksyutina, and D. G. Kolesnikov, *Med. Prom.*, No. 3, 40 (1962).
2. V. I. Litvinenko and N. P. Maksyutina, *Khim. Prirodn. Soedin.*, 420 (1965).
3. D. A. Murav'eva, Author's Abstract of Doctoral Dissertation [in Russian] (1965).
4. E. T. Bryant, *J. Amer. Chem. Soc. Sci.*, **39**, 8, 480 (1950).
5. L. Hórhammer and K. H. Müller, *Arch. Pharm.*, **287**, 310 (1954).
6. Fr. Šantavý, H. Patěšilová, and R. Kubiček, *Chem. Listy*, **51**, No. 24, 9 (1958).

Pyatigorsk Pharmaceutical Institute. Translated from *Khimiya Prirodnikh Soedinenii*, No. 6, pp. 786-787, November-December, 1974. Original article submitted August 17, 1973.

©1976 Plenum Publishing Corporation, 227 West 17th Street, New York, N.Y. 10011. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, microfilming, recording or otherwise, without written permission of the publisher. A copy of this article is available from the publisher for \$15.00.