

ACIDS OF POMEGRANATE PEEL

E. P. Nosacheva, Yu. B. Kerimov,
and T. N. Bikbulatova

UDC 547.477

The present paper gives the results of a chemical investigation of the peel of the fruit of Punica granatum L. (pomegranate), which is a waste material from the production of pomegranate juice.

The air-dried peel was exhaustively extracted with 70% ethanol. After the elimination of the solvent under vacuum, the aqueous residue was treated with chloroform to eliminate ballast substances and was then extracted with ether. On concentration of the ethereal extract, a precipitate deposited which was insoluble in hot water, ethanol, and ether and partially soluble in methanol. After purification, the substance had decomp. p. 355°C.

Qualitative reactions [1], R_f value (FN-15 paper, 15% acetic acid system), and the IR spectrum of the substance were identical with those of ellagic acid.

On the basis of the results of a determination of the maximum intensities of the spots (SF-4a at λ 440 nm) revealed with a 1% solution of iron ammonium alum, it was established that the peel contains 0.55% of ellagic acid on the air-dry raw material. The ethereal extract was evaporated to dryness and chromatographed on Kapron with water. This gave gallic acid with mp 239°C, which was identified from its IR spectrum and by chromatography with a marker. The quantitative determination of the gallic acid (0.09% on the absolutely dry raw material) was performed similarly.

LITERATURE CITED

1. T. Istirher and K. H. Lisken, Arch. Pharm., 295/67, 11, 823 (1962).

Mardakyan Tree Park, V. L. Komarov Institute of Botany, Academy of Sciences of the Azerbaidzhanian SSR. Translated from Khimiya Prirodnikh Soedinenii, No. 1, pp. 108-109, January-February, 1973. Original article submitted August 7, 1972.

©1975 Consultants Bureau, a division of 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.