it contain pure gossypol, and in the other cases the solvent participated in the structure of the lattice.

Thus, we now have seven different crystalline forms of gossypol. The search for new forms and the interpretation of the structures of the single crystals obtained are continuing.

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THIN-LAYER CHROMATOGRAPHY OF GOSSYPURPURIN ON SILUFOL

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UDC 547.972

Gossypurpurin is a natural pigment of cotton seeds that is second in importance to gossypol [1]. Accumulating in cotton seeds on storage it adversely affects their quality and, on passing into the oil, because of its intensive coloration, complicates the refining process.

For the qualitative detection of gossypurpurin in samples from the industrial processing of cotton seeds (kernel, meal, oil, flour) we have used the method of thin-layer chromatography on Silufol for the first time. Gossypurpurin was obtained as a model. It was isolated from the products of the chloroform extraction of defatted gossypol-rich flour [2] and the gossypol glands isolated from the same cottonseed flour by the method of wet fractionation [3]. First, a mixture of benzene and hexane (7:3) removed the gossypol from these materials, and then chloroform extracted the gossypurpurin. It was recrystallized from benzene until a positive qualitative reaction with $SbCl_3$ was obtained [4].

Chloroform solutions of gossypurpurin and of gossypol, taken for comparison, were deposited on Silufol plates with dimensions of 5 × 7 cm; the time of chromatography was 5 min. The spots were revealed with a 2% chloroform solution of $SbCl_3$, with which gossypol gave a red and gossypurpurin a blue color. We selected the systems usually used for the chromatography of gossypol and lipids. The R_f values of gossypurpurin and gossypol on TLC in the solvent systems used are given below.

Solvent systems	R_f of gossypurpurin	R_f of gossypol
1. Chloroform [5]	At the start	0.10
2. Heptane–chloroform–acetic acid (80:10:25) [6]	"	0.34
3. Chloroform–acetone–formic acid (95:4:1) [5]	0.12	0.42
4. Chloroform–methanol–water (65:25:4) [7]	0.56	0.74
5. Chloroform–methanol (30.5)	0.58	0.75
6. Chloroform–methanol (20:5) [8]	0.75	0.80
7. Benzene–methanol (19:1) [5]	0.05	0.30
8. Benzene–methanol (20:5)	0.30	0.43
9. Benzene–ethanol (3:1) [8]	0.55	0.57
10. Hexane–diethyl ether–formic acid (70:30:1) [5]	At the start	0.23
11. Hexane–ethyl acetate (3:1) [5]	0.04	0.40
12. Heptane–diethyl ether–methanol–acetic acid (90:20:2:3) [7]	At the start	0.17

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Translated from Khimiya Prirodnykh Soedinenii, No. 5, pp. 664-665, September-October, 1984. Original article submitted February 28, 1984.

0009-3130/84/2005-0632$08.50

It can be seen from the results obtained that in all systems the R_f values of gossypurpurin are lower than those of gossypol, which indicates its higher polarity than gossypol and is an additional confirmation of the structure of gossypurpurin corresponding to Adams' formula [9].

It must be mentioned that the best separation took place on the use of systems 4, 5, and 8, when the spots were not only well separated from one another but were also compact and without "tails."

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