insulin). Amino acid analysis: Asp 2.82 (3), Thr 1.70 (2), Ser 3.00 (3), Glu 7.06 (7), Pro 1.03 (1), Gly 4.00 (4), Ala 1.00 (1), Cys 6.56 (7), Val 3.83 (4), Ile 1.65 (2), Leu 6.03 (6), Tyr 3.70 (4), Phe 3.01 (3), Lys 1.00 (1), His 2.10 (2), Arg 0.85 (1). Results of a determination of the C-terminal amino acids: Asn 0.99 (1); Cys 0.95 (1).

In testing for convulsive effect on mice [2], the biological activity of compound (I) was 100% (in comparison with the activity of an international standard).

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HYDROGENOLYSIS OF THE PROTOLIGNIN OF RICE HUSKS

Z. K. Saipov, T. S. Kaplunova, Kh. A. Abduazimov, and M. F. Abidova

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As a result of a study of the structure of mechanical-grinding lignin (MGL) isolated from the wood of the birch and the oak, and also of the protolignin of Picea jezoensis by hydrogenolysis using copper chromite as catalyst [1, 2], a number of monomeric and dimeric hydrogenolysis products have been identified.

We have carried out the hydrogenolysis of rice husks by the methods of Sakakibara et al. [2]. As catalysts we employed copper chromite and a modified nickel catalyst that is used in the deep hydrocracking of petroleum. Hydrogenolysis was carried out for 60 min at an initial hydrogen pressure of 85 atm, a working pressure of 180-190 atm, and a temperature of 200°C; the solvent was dioxane–water (9:1), and the amount of catalyst was 40% on the weight of the raw material.

The combined products obtained were concentrated and were then dissolved in chloroform and extracted with 5% caustic soda. After acidification of the alkaline extract by the addition of hydrochloric acid to pH 8, the hydrogenolysis products were extracted with ether, and then, at pH 2, with ethyl acetate.

The combined ether- and (ethyl acetate)-extracted materials were chromatographed on a column of Sephadex LH-20. The eluogram showed that the combined ether-extracted material consisted of monomeric, dimeric, and oligomeric products, while in the ethyl acetate extract the dimeric fraction predominated.

The components of the monomeric fraction of the combined hydrogenolysis products were identified with the aid of thin-layer chromatography on Silufol (benzene–ethanol (4:1)) with markers, and also by gas-liquid chromatography:

Substance	R_f in the product	R_f of a marker	% on the total copper chromite catalyst	% on the total catalyst used in the deep hydrocracking of petroleum
p-Hydroxyphenylethane	0.61	0,63	12.3	7.4
p-Hydroxyphenylpropane	0,69	0.70	9.4	68,4
Guaiacylethane	0.81	0,80	1,3	—
1-Guaiacylpropan-1-ol	0,77	0.76	2,5	3,8
3-Guaiacylpropan-1-ol	0.39	0,38	4,5	—
o-Cresol	0,71	0,71	1.3	Сл.
Phenol	—	—	—	12.1
Guaiacol			—	Сл.
1-Guaiacylethanol			—	2.4
Guaiacylpropane			—	5,8

Institute of the Chemistry of Plant Substances, Academy of Sciences of the Uzbek SSR, Tashkent.

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As we see, the qualitative comositions of the products were different. Apparently the catalysts that we used exert a pronounced cleaving action on the lignin macromolecule, the syringyl nucleus being decomposed comparatively readily.

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