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TELEFAX Naslovna Strana

TELEFAX Cover Sheet

Broj / No: 2297 Zagreb, 11. 11. 91.

Za / To: Fairchild Biochemistry Building

Na ime / Attn.: Prof. Huffaker Hoselson

Od / From: Prof. dr. Ž. Binenfeld

Strana / Pages (uklj.ovu stranu / incl.this page): 03

Daljnje poruke / Further messages :

Pozdrav / Best regards

UNIVERSITY OF ZAGREB
FACULTY OF NATURAL SCIENCES AND MATHEMATICS

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Dear Sir,

Zagreb, 11 November 1991

I would be very obliged if you could inform me whether you or somebody you know has some knowledge of this kind of application and to what purposes it could serve. If you or some other institution are interested in solving this problem, I will send you immediately the original sample of "spider web". Personally, I have no idea to what purposes this could serve. I would appreciate your urgent answer.

Thanking you in advance, I remain,

Sincerely yours,

Zlatko Binenfeld

For the last 3 months a polymeric material like spider web has been thrown from planes over the whole territory of Croatia. Only in one day, on 7 November it was used practically in the whole Republic of Croatia.

The material was thrown from planes at great heights and the time of spider web appearance on the ground was about 30 minutes. The spider fibers (length up to 30 m) adhere to different materials with different affinity, but a special affinity is shown towards metal objects. The photographs as the specimen of "spider web" can be obtained upon request.

The morphological analysis has showed that it is a two-component system. It is composed of two different kinds of webs linked together in threads. The thickness of basic web is from 0.1-0.4 microns. By electronic microscopy, no bacteria or viruses have been found. The biological experiments on chicken embryos and other adequate media have also been negative regarding the presence of viruses, fungi and bacteria. The presence of warfare agents has not been detected on the examined fibres.

The up to now performed chemical analyses have showed a polymeric structure containing peptide bounds formed from different amino acids.

The physical analysis has showed that the fibres possess isolating properties i.e. do not conduct electric current. The dielectric constant is between 2 and 3. The spectroscopic analysis in the IR to UV/VIS range has showed fluorescence at UV/VIS.