Akkreditiert gemäß EN 45001
Deutscher Akkreditierungs Rat
DAC-P-0035-97-00

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Aschaffenburg, 29.10.1997

From: Kranke
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Report

Order No.: 3187/1 **Page 1 of 3 pages**

Orderer: Danogips GmbH, Düsseldorf/Germany

Date of order: 10.09.1997

Receipt of sample material: 11.09. and 22.09.1997

Origin of sample material: From the orderer

Purpose: Microbiological testing of a gypsum plate sample for its antimicrobic substances

(Dr. Hasselberg)

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Paper Engineer

The present report refers exclusively to the samples as laid out therein. Information and statistical data on the results can be obtained on request.

Non-accredited determinations have not been validated at the date of the accreditation. Individual determinations were not intended for accreditation owing to their restricted field of application. In these cases, the necessary accuracy for the evaluation is ensured by the internal quality management system.

Sample Material

For analysis the following sample material was in hand:

Sample 1:	Aqueous solution of active substance against infest of microorganisms for the pretreatment of the ground, submitted to ISEGA
Sample 2:	Paint for intermediate and cover coat, submitted to ISEGA
Sample 3:	Gypsum plates with deadening nonwoven, (2 x 2) cm cuttings, thickness: 6.5 mm

Carrying out of the tests

The testing for antimicrobic substances was made following the „Hemmtest nach Wallhäußer" as well as following DIN EN 1104 „Bestimmung des Übergangs antimikrobieller Bestandteile" (Determination of the migration of antimicrobic substances).

Preparation of samples:

The cuttings of the gypsum plates (sample 3) were admitted with 0.08 ml of the 1 : 4 diluted solution of the active substance according to sample 1. After drying at room temperature, the paint according to sample 2 was applied (approx. 0.3 g commercial product per specimen) and dried at room temperature.

Performing of the microbiological testing:

In order to determine the inhibition effect of the fitted gypsum plates on microorganisms, a spur-forming bacterium and a mould fungus were injected into the nutrient media.

The cuttings of the gypsum plates (sample 3) were put into sterile culture dishes, the side with the antimicrobic fitting showing upwardly. Then the injected nutrient media were added to cover the objects of examination with approx. 3 mm of the nutrient media. Furthermore, specimens with the antimicrobic fitting were also examined with the injected nutrient medium.

The breeding was made for 3 and 14 days at 37 °C and 25 °C.

In order to control the results, the examination was repeated by analogy with the a.m. examination, however, this time with cuttings of gypsum plates with no antimicrobic fitting.

The evaluation was made immediately after termination of the breeding period and in conformity with the scheme for evaluating the inhibition of growth:

Grade 1:	The agar layer above the specimen showed the same growth as the environment.
Grade 2:	Some colonies are growing on the agar layer above the specimen: relative inhibition in comparison with the environment.
Grade 3:	There is no growth of microorganisms on the agar layer above the specimen.
Grade 4:	A clear inhibition area is detected around the specimen, width < 2 mm.
Grade 5:	A clear inhibition area is detected around the specimen, width > 2 mm.

Test Result

Gypsum plates with antimicrobic fitting:

The fitted cuttings of gypsum plates, which had been covered with the injected nutrient medium, showed antimicrobic characteristics on the test germs employed, i.e. no micro-organisms were growing on the injected nutrient media above the specimen.

The fitted cuttings of gypsum plates, which had been put on the injected nutrient media showed antimicrobic characteristics on the test germs employed, i.e. no microorganisms were growing on the injected nutrient media in the environment of the specimen.

Control examination: gypsum plates with no antimicrobic fitting:

The specimens with no antimicrobic fitting used as reference samples which had been covered with the injected nutrient media, showed no antimicrobic characteristics on the test germs employed, i.e. the injected nutrient media above the specimens showed the same growth as the environment.

The specimens with no antimicrobic fitting used as reference samples which had been covered with the injected nutrient media, showed no antimicrobic characteristics on the test germs employed, i.e microorganisms were growing on the injected nutrient media in the environment of the specimens.

Slides were made for documentation.

Evaluation of the Test Result

The gypsum plates submitted for testing had an antimicrobic fitting and achieved

Grade 3

with regard to the growth inhibition on the microorganisms examined according to the a.m. evaluation scheme.

The accreditation applies to the methods marked with * in the test report (Register no. DAC-P-0035-97-00).

End of report