

# Building Research Advisory Service

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Biodeterioration Section

Test Report

DETERMINATION OF THE MOULD RESISTANCE OF FUNGICIDAL COATINGS

Method: Exposure of coating in a high condensation mould test chamber

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Materials Tested: 1. Biocheck Fungicidal Emulsion.

Code: P49

for Director  
Building Research Establishment

DEPARTMENT OF THE ENVIRONMENT  
BUILDING RESEARCH ESTABLISHMENT  
PRINCES RISBOROUGH LABORATORY

BRE Project No: PT 253  
PRL File No: PR 118/019  
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Bio Job Jo: 86110

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Method: Exposure of coating in a high condensation mould test chamber

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Materials Tested: 1. Biocheck Fungicidal Emulsion. Code: P49  
2. Susceptible standard emulsion paint (control)  
Suppliers: Material 1 - Mould Growth Consultants. Contact: Mr A R Ellis  
Material 2 - PRL

Diluent: None

Substrate: British Gypsum "Gyproc Duplex" 12.7 mm plasterboard with a skim-coat of finishing plaster. Test materials applied in single vertical strips measuring approximately 250 x 2200 mm to a wall surface of the test chamber.

Application: Brush applied in two coats at a coverage rate of approximately  $12 \text{ m}^2 \text{ l}^{-1}$ .

Pre-conditioning: None.

Test fungi: Natural infection by micro-organisms present in the air of the test chamber.

Test conditions: Outer chamber: cooled to constant  $6^\circ\text{C} \pm 2^\circ\text{C}$ .  
Test chamber: cycled temperature and humidity to give 10-15°C, 80-85% relative humidity (rh).

Duration of test: Six months.

Observations: The PRL high condensation test chamber is regarded as a model of severe conditions likely to be encountered under domestic circumstances where gross contamination of wall surfaces with nutrifying substances does not occur. Under the test conditions the standard emulsion paint used as a control was progressively and extensively colonised by mould fungi during the first 6 to 12 weeks of exposure. No mould growth occurred on the Biocheck paint during the entire course of exposure for 6 months.

A summary of the observations is presented in Table 1. Plates 1 and 2 show the appearance of test paints at the beginning and end of the test period; note that the part of the wall painted with the reference paint is labelled "Control -".

## CONCLUSIONS

1. Biocheck paint was completely resistant to colonisation and growth of mould fungi during 6 months' exposure to conditions of high condensation in the PRL mould test chamber.
2. The non-fungicidal emulsion paint tested under identical conditions of exposure was progressively and heavily overgrown by moulds during the first 12 weeks of testing.
3. On the basis of the results obtained, Biocheck can be expected to perform well in resisting the growth of moulds on surfaces prone to condensation and mould growth.

C GRANT  
Project Leader  
24 July 1987

A F BRAVERY  
Section Head

Table 1 RESULTS OF ASSESSMENTS OF MOULD GROWTH ON PAINTS IN THE  
PRL HIGH CONDENSATION TEST CHAMBER

Paint	Assessment after 6 months	
	Rating	Notes
Biocheck	0	Completely free of mould growth
Susceptible emulsion (Control)	5	Severe and extensive overgrowth by moulds

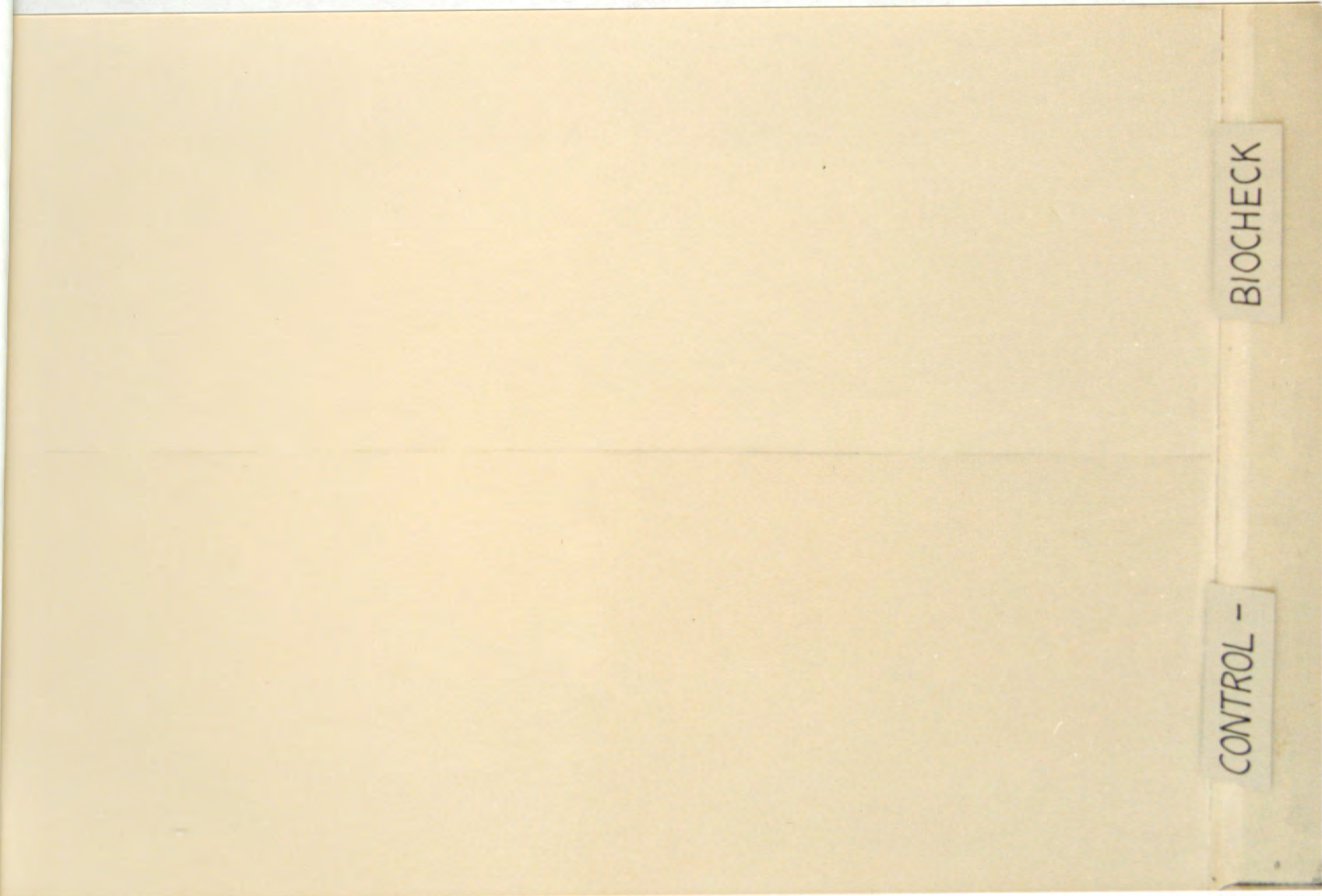


Plate 1 Appearance of paints at start of test.  
Neg No 87030.3



Plate 2 Appearance of paints after 6 months.  
Neg No 87198.5