Hygiene & Microbiology Research Center, Tokyo

For Environment and Human Health

Anti-mould Test

1. Testing Product

AURO No.413 'Kabistop' ('Mould-Stop') 1 item

2. Purpose of Testing

Test the anti-mould effectiveness of the sample

3. Type of Moulds to Test Against

Aspergillus niger	NBRC 6341
Cladosporium cladosporioides	IFO 6348
Penicillium citrinum	NBRC 6352
Phoma sp.	HMRC 2207

4. Testing Method

4-1) Spore Fluid Preparation

Inoculated the testing moulds on Potato Dextrose Agar (Nissui) and cultivated at 25 °C for 1 week. Produced the fluid with spore count $10^6/\text{ml}$ by using 0.05% Tween 80.

4-2) Testing Sample Preparation and Spore Fluid Inoculation

Produced testing sample by atomising the testing product on sterile Petri dish and leaving it for 15 minutes. Then inoculated a testing sample with one of the spore fluids and cultivated it in the environment with temperature at 25 $^{\circ}\text{C}$, relative humidity over 95%. Also prepared untreated control for comparing purposes by inoculating spore fluids on sterile Petri dishes which are not treated with the testing product.

4-3) Evaluation

Cultivated the testing samples for 4 weeks. Observed existence or non-existence of mould visually and by microscope weekly.

5. Result of the Test

Table 1 show the result of the product sample's anti-mould effectiveness. (Photos 1-8).

Table 1. AURO No.413 Anti-mould testing evaluation

	Cultivation 1 st Week		Cultivation 2 nd Week		Cultivation 3 rd Week		Cultivation 4 th Week	
Type of Mould	X 7' 1) <i>(</i> ;	X 7' 1) <i>(</i> '	X 7' 1) (°	T 7' 1) <i>(</i> (
	Visual	Microscope	Visuai	Microscope	Visuai	Microscope	visuai	Microscope
Aspergillus niger	_	_	_	_	_	_	_	_
Cladosporium								
cladosporioides	_	_	_	_	_	_	_	_
Penicillium								
citrinum	_	_	_	_	_	_	_	_
Phoma sp.	_	_	_	_	_	_	_	_
Untreated Control	_	+	+	+	+	+	+	+

-: No mould is observed +: Mould is observed



Foto 1 *Aspergillus niger*, cultivation on the untreated control, 4th week.



 $\label{eq:continuous} Fo to \ 2 \ \textit{Aspergillus niger}, \\ cultivation \ on \ AURO \ No.413 \ Anti-mould \ treated \ test \ sample, \ 4^{th} \ week.$

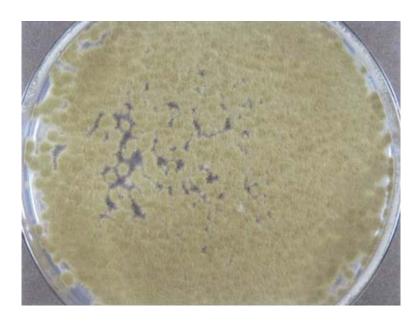


Photo 3 *Cladosporium cladiosporioides*, cultivation on the untreated control, 4th week.



 $Photo\ 4\ Cladosporium\ cladiosporioides, \\ cultivation\ on\ AURO\ No.413\ Anti-mould\ treated\ test\ sample,\ 4^{th}\ week.$



Photo 5 *Penicillium citrinum*, cultivation on the untreated control, 4th week.



 $Photo \ 6 \ Penicillium \ citrinum, \\ cultivation \ on \ AURO \ No.413 \ Anti-mould \ treated \ test \ sample, \ 4^{th} \ week.$

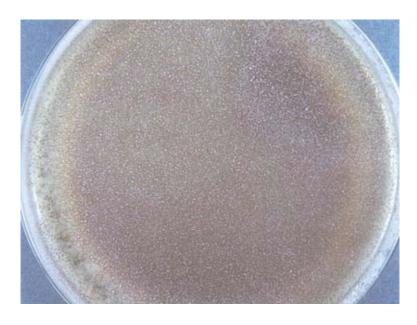
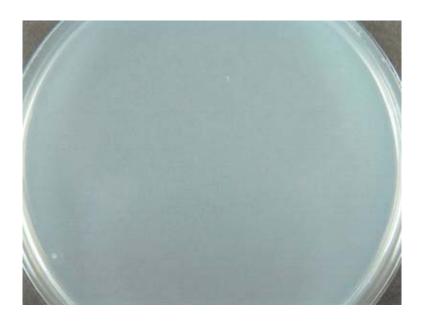


Photo 7 *Phoma* sp., cultivation on the untreated control, 4th week



 ${\bf Photo~8~Phoma~sp.,}$ cultivation on AURO No.413 Anti-mould treated test sample, ${\bf 4^{th}~week.}$