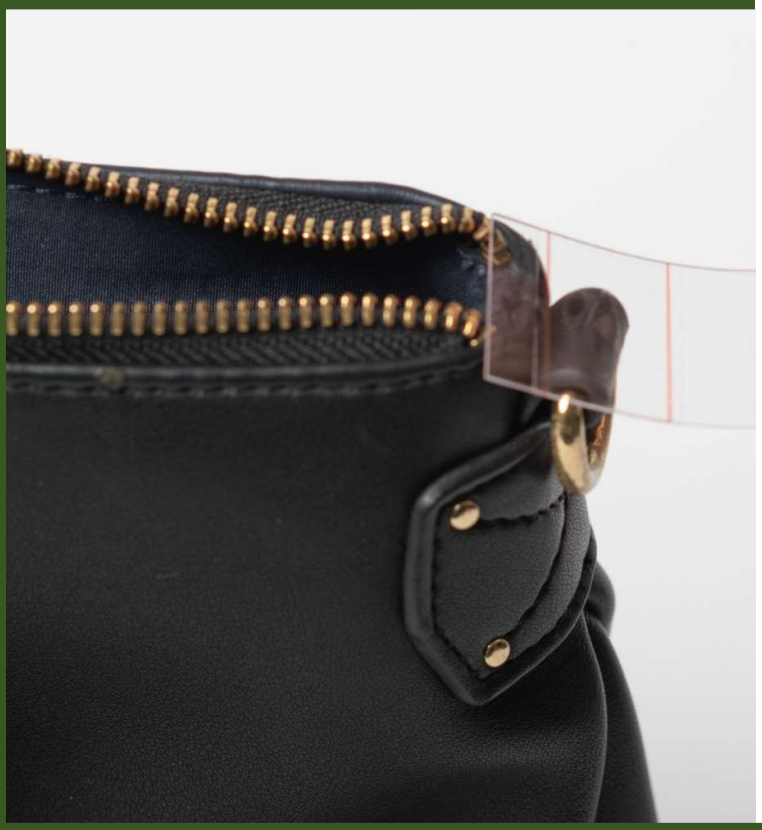
MICRO-PAK®

Unrivaled Mold & Moisture Protection

霉菌筛选测试

简介及采样程序



迈可达霉菌筛选测试

迈可达霉菌筛选测试使客户能够以简单、快速和具有成本效益的方式测试原材料、成品或各种表面上的霉菌污染。样品由用户自行采集并送至迈可达技术办公室进行分析，迈可达随后会发出一份报告，指出所发现的任何霉菌、估计霉菌水平含量和建议一个整改计划。 请参阅第 4 页的测试范例 。

程序

步骤 1

- **采样**
- 迈可达会向工厂提供取样胶片，其中包含有关如何取样的简易说明（详情请参阅第 2 页）。

步骤 2

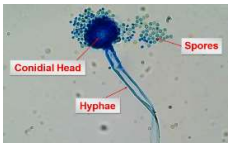
- **送递样品**
- 工厂把已采样的胶片邮寄给迈可达（无需寄送被采样的物料)

步骤 3

- **分析**
- 迈可达的专业技术人员/微生物学专员会使用专门的方法来分析取样胶片。

步骤 4

- **测试结果**
- 迈可达会在两个工作日内发出报告，确认霉菌类型（如有）和相对受污染程度。



霉菌测试方法

迈可达的菌测试提供了一种标准化的表面取样方法，可以简易快速地测试存在的**所有类型的霉菌以及霉菌污染的相对程度***。从取样胶片收集的混合标本会由迈可达的专业技术人员/微生物学专员在生物显微镜下检查，霉菌的识别是基于特定观察区域（孢子、菌丝、分生孢子头，和孢子囊）下的指示性霉菌元素。迈可达更会使用专有软件来计算污染程度以及建议一个整改计划。

**结果仅指测试的样品区域，因此不能表明任何其他部分是否存在霉菌。*

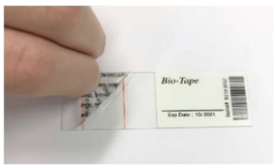
付款资料

价格	迈可达取样胶片连同样品分析和报告的价格为每张 80 美元。 最少订购五张胶片/报告。
所需时间	一般会在收到送测样品后两个工作日内发出报告。
测试地点	已采样的胶片可以送到迈可达在香港、中山、莆田、越南、印度、孟加拉国国和美国的技术办公室进行测试。(联络数据请参阅第 5 页)
如何开始	1. 电邮至 info@micropakltd.com 以订购霉菌测试的取样胶片。 2. 付款 3. 迈可达会把取样胶片连同简易说明一起发送。 4. 采样并将胶片邮寄回迈可达。 5. 从迈可达取得结果。

霉菌筛选测试 – 采样程序

1. 从胶盒中取出取样胶片。

2. 分别在取样胶片和胶盒上的卷标记录取样位置及样品详情。将标签贴于胶盒背部。

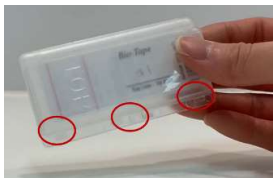


3. 除去取样胶片上的保护贴，露出黏贴表面。
   注: 请勿触摸采样窗口范围。黏贴表面黏力很强，只需轻轻按压即可 。

4. 将取样胶片上的黏贴表面下方放在取样的表面上。**(使用两条红色定位线将黏贴范围对准所需位置上取样)** 轻轻向下按压并依照以下指示：

   - 若样品**没有可见霉菌**，每个样品可使用一张胶片在 **5-6 个不同位置上采样**。 请注意每次采样的压力不要过大。 （注：尽量覆盖样品的主要物料、内衬和不同材料）
   - 若样品**有可见霉菌**，每个样品可使用一张胶片在 **最多 3 个不同位置上采样**。

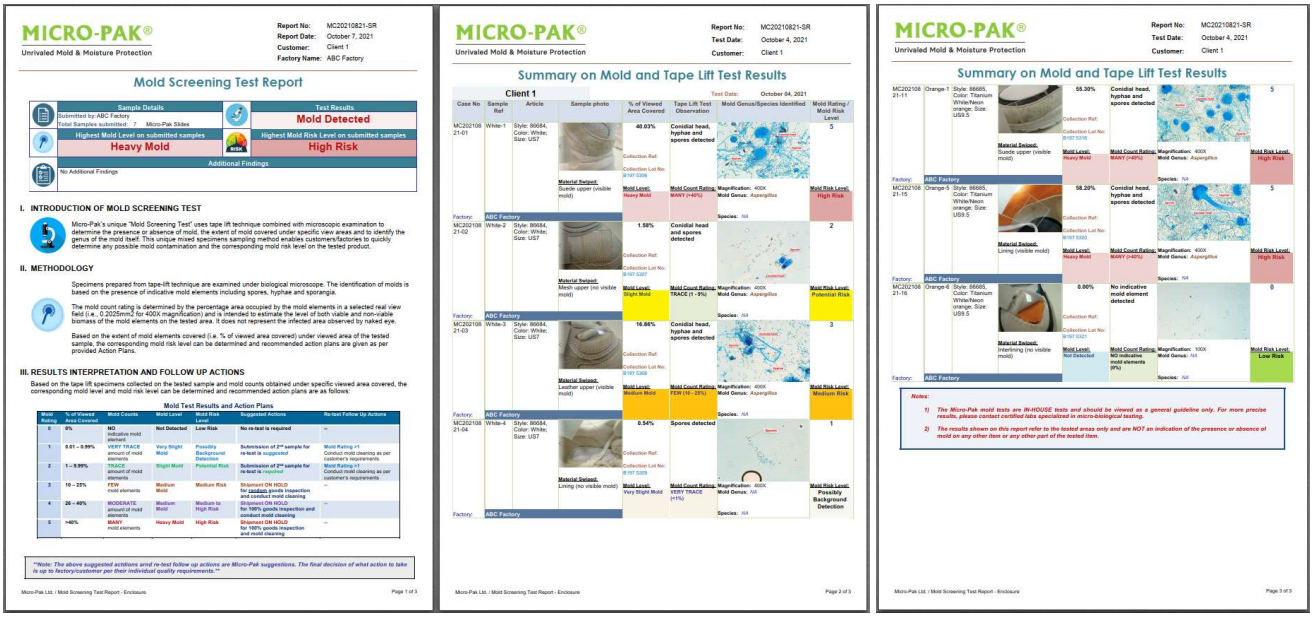
5. 将已取样的胶片小心取下并放回胶盒中，标签面朝上方。**(采样窗口应“TOP” 字样下方)**
   注: 请勿贴上保护贴。



6. 妥当地关闭胶盒。
   注: 确保三个红圈位置紧扣。

7. 将已盖好的胶盒放进密封胶袋中，连同填妥的“霉菌测试申请表格“寄到就近的迈可达有限公司技术办事处作进一步分析。

报告模板



MICRO-PAK®
Unrivaled Mold & Moisture Protection

Report No: MC20210821-SR
Report Date: October 7, 2021
Customer: Client 1
Factory Name: ABC Factory

Mold Screening Test Report

Sample Details	Test Results
Submitted by: ABC Factory Total Samples submitted: 7 Micro-Pak Slides	Mold Detected
Highest Mold Level on submitted samples: Heavy Mold	Highest Mold Risk Level on submitted samples: High Risk
Additional Findings: No Additional Findings	

I. INTRODUCTION OF MOLD SCREENING TEST

Micro-Pak's unique "Mold Screening Test" uses tape lift technique combined with microscopic examination to determine the presence or absence of mold, the extent of mold covered under specific view areas and to identify the genus of the mold itself. This unique mixed specimens sampling method enables customers/factories to quickly determine any possible mold contamination and the corresponding mold risk level on the tested product.

II. METHODOLOGY

Specimens prepared from tape-lift technique are examined under biological microscope. The identification of molds is based on the presence of indicative mold elements including spores, hyphae and sporangia.

The mold count rating is determined by the percentage area occupied by the mold elements in a selected real view field (i.e., 0.2025mm² for 400X magnification) and is intended to estimate the level of both viable and non-viable biomass of the mold elements on the tested area. It does not represent the infected area observed by naked eye.

Based on the extent of mold elements covered (i.e. % of viewed area covered) under viewed area of the tested sample, the corresponding mold risk level can be determined and recommended action plans are given as per provided Action Plans.

III. RESULTS INTERPRETATION AND FOLLOW UP ACTIONS

Based on the tape lift specimens collected on the tested sample and mold counts obtained under specific viewed area covered, the corresponding mold level and mold risk level can be determined and recommended action plans are as follows:

Mold Test Results and Action Plans

Mold Rating	% of Viewed Area Covered	Mold Counts	Mold Level	Mold Risk Level	Suggested Actions	Re-test Follow Up Actions
0	0%	NO indicative mold elements	Not Detected	Low Risk	No re-test is required	--
1	0.01 – 0.99%	VERY TRACE amount of mold elements	Very Slight Mold	Possibly Background Detection	Submission of 2nd sample for re-test is suggested	Mold Rating >1 Conduct mold cleaning as per customer's requirements
2	1 – 9.99%	TRACE amount of mold elements	Slight Mold	Potential Risk	Submission of 2nd sample for re-test is required	Mold Rating >1 Conduct mold cleaning as per customer's requirements
3	10 – 25%	FEW mold elements	Medium Mold	Medium Risk	Shipment ON HOLD for random goods inspection and conduct mold cleaning	--
4	26 – 40%	MODERATE amount of mold elements	Medium Mold	Medium to High Risk	Shipment ON HOLD for 100% goods inspection and conduct mold cleaning	--
5	>40%	MANY mold elements	Heavy Mold	High Risk	Shipment ON HOLD for 100% goods inspection and mold cleaning	--

"Note: The above suggested actions and re-test follow up actions are Micro-Pak suggestions. The final decision of what action to take is up to factory/customer per their individual quality requirements."

Micro-Pak Ltd. / Mold Screening Test Report - Enclosure Page 1 of 3

MICRO-PAK®
Unrivaled Mold & Moisture Protection

Report No: MC20210821-SR
Test Date: October 4, 2021
Customer: Client 1

Summary on Mold and Tape Lift Test Results

Client 1 — Test Date: October 04, 2021

Case No	Sample Ref	Article	Sample photo	% of Viewed Area Covered	Tape Lift Test Observation	Mold Genus/Species Identified	Mold Rating / Mold Risk Level
MC202108 21-01	White-1	Style: 86684, Color: White; Size: US7		40.03%	Conidial head, hyphae and spores detected	Magnification: 400X Mold Genus: *Aspergillus* Species: *NA*	5
MC202108 21-02	White-2	Style: 86684, Color: White; Size: US7		1.58%	Conidial head and spores detected	Magnification: 400X Mold Genus: *Aspergillus* Species: *NA*	2
MC202108 21-03	White-3	Style: 86684, Color: White; Size: US7		16.86%	Conidial head, hyphae and spores detected	Magnification: 400X Mold Genus: *Aspergillus* Species: *NA*	3
MC202108 21-04	White-4	Style: 86684, Color: White; Size: US7		0.54%	Spores detected	Magnification: 400X Mold Genus: *NA* Species: *NA*	1

Factory: ABC Factory

Micro-Pak Ltd. / Mold Screening Test Report - Enclosure Page 2 of 3

MICRO-PAK®
Unrivaled Mold & Moisture Protection

Report No: MC20210821-SR
Test Date: October 4, 2021
Customer: Client 1

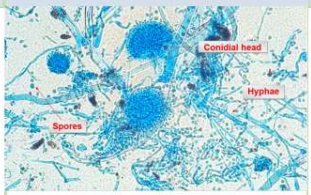
Summary on Mold and Tape Lift Test Results

Case No	Sample Ref	Article	Sample photo	% of Viewed Area Covered	Tape Lift Test Observation	Mold Genus/Species Identified	Mold Rating / Mold Risk Level
MC202108 21-11	Orange-1	Style: 86685, Color: Titanium White/Neon orange; Size: US9.5		55.30%	Conidial head, hyphae and spores detected	Magnification: 400X Mold Genus: *Aspergillus* Species: *NA*	5
MC202108 21-15	Orange-5	Style: 86685, Color: Titanium White/Neon orange; Size: US9.5		58.20%	Conidial head, hyphae and spores detected	Magnification: 400X Mold Genus: *Aspergillus* Species: *NA*	5
MC202108 21-16	Orange-6	Style: 86685, Color: Titanium White/Neon orange; Size: US9.5		0.00%	No indicative mold element detected	Magnification: 100X Mold Genus: *NA* Species: *NA*	0

Factory: ABC Factory

Notes:
1) *The Micro-Pak mold tests are IN-HOUSE tests and should be viewed as a general guideline only. For more precise results, please contact certified labs specialized in micro-biological testing.*
2) *The results shown on this report refer to the tested areas only and are NOT an indication of the presence or absence of mold on any other item or any other part of the tested item.*

Micro-Pak Ltd. / Mold Screening Test Report - Enclosure Page 3 of 3

Case No	Sample Ref	Article	Sample photo	% of Viewed Area Covered	Tape Lift Test Observation	Mold Genus/Species Identified	Mold Rating / Mold Risk Level
MC202108 21-01	White-1	Style: 86684, Color: White; Size: US7		40.03%	Conidial head, hyphae and spores detected		5
			Material Swiped: Suede upper (visible mold)	Collection Ref: Collection Lot No: B197 5306			
				Mold Level: Heavy Mold	**Mold Count Rating:** MANY (>40%)	**Magnification:** 400X **Mold Genus:** *Aspergillus* **Species:** *NA*	**Mold Risk Level:** High Risk
Factory:	ABC Factory						

测试范例

迈可达霉菌筛选测试可让供货商在发货前有进一步的预防措施，这些测试可以根据客户的特定需求进行定制，从而得出有价值的信息以计划成本开支，以下是关于抽样计划的一般建议。如有任何疑问，请电邮至 info@micropakltd.com

哪些产品需要测试?

初步测试应在成品上进行。开始时，我们建议测试应集中在风险最高的类别。如：

1) 过去 12 个月内出现过发霉问题的产品线
2) 过去 12 个月内有发霉问题的工厂所生产的产品
3) 高风险的材料
4) 过去 12 个月内有发霉问题的材料
5) 已经或将要长期储存的货物

需要测试多少项目以及多久要测试一次?

1) 每张采购单都需要进行测试。
2) 测试项目的数量应基于每张采购单的数量。 请参阅以下抽样计划的示例
3) 若样品没有可见霉菌，每个样品可使用一张胶片在 5-6 个不同位置上采样。若样品有可见霉菌，每个样品可使用一张胶片在最多 3 个不同位置上采样。为避免样品交叉污染，一张采样胶片只可用于单一项样品测试。

测试程序

供货商应选择固定数量的货箱进行检验，应检查这些纸箱中的物品是否有任何可见霉菌或霉菌气味，从这些被检查的货物中，应选择一定数量并使用迈可达取样胶片进行霉菌筛选测试。

高风险产品的抽样示例

下列的抽样计划是我们一个主要客户针对确定为“高风险”产品的示例。

	每张采购单的货品数量	检测 (每箱数量)	所需检测数量
1	超过 50,000 件	20	每箱 2 件
2	10,000 - 50,000 件	10	每箱 2 件
3	少于 10,000 件	5	每箱 2 件

这仅用于指引，并非固定建议。由于有许多不同情况需要考虑，迈可达可以帮助你制定更具体的标准抽样作业程序。如欲索取更多信息，请电邮至 info@micropakltd.com

已取样的迈可达胶片可发送到哪里?

迈可达胶片可发送至迈可达在香港、中国、越南、孟加拉国、印度和美国最就近的技术办公室，详情如下。有关迈可达霉菌筛选测试计划的更多详情或订购迈可达霉菌筛选测试用的胶片，请电邮 info@micropakltd.com 与我们联络。

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