



INTEGRAL SYSTEM YEASTS *Plus*

描述

INTEGRAL SYSTEM YEASTS *Plus* 是含有24well生化基質和乾燥抗真菌劑系統為鑑定最重要的臨床酵母菌的識別和抗真菌劑藥敏。系統是將微生物接種了細菌懸浮液和在培養箱36±1°C培養48小時。

套組包裝

The kit contains:

Ref. 71822	20 Systems INTEGRAL SYSTEM YEASTS <i>Plus</i>	40 Vials of <i>Physiological Solution</i> (4.5 mL/vial)
Ref. 79822	4 Systems INTEGRAL SYSTEM YEASTS <i>Plus</i>	8 Vials of <i>Physiological Solution</i> (4.5 mL/vial)
1 Cartridge of Xylose Disc - 1 Instructions Sheet - 1 Test Results Form		

套組內不包含物品

Vaseline oil for microbiological use (VASELINE OIL: 2 bottles x 50 mL, ref.80278)

Various materials for laboratory of microbiology

配置

The configuration of the system is shown in Table no.1:

Table no.1

Well	ASSIMILATION	Well	CHROMATIC REACTION
1-GLU	Glucose	13-CHR	Chromogenic substrate
2-MAL	Maltose	Well	ANTIMYCOTICS
3-SAC	Saccharose	14-NY	Nistatin 1.25 µg/mL
4-LAC	Lactose	15-AMB	Amphotericin 2 µg/mL
5-GAL	Galactose	16-FCY	Flucytosine 16 µg/mL
6-MEL	Melibiose	17-ECN	Econazole 2 µg/mL
7-CEL	Cellobiose	18-KCA	Ketoconazole 0.5 µg/mL
8-INO	Inositol	19-CLO	Clotrimazole 1 µg/mL
9-XYL	Xylose	20-MIC	Miconazole 2 µg/mL
10-RAF	Raffinose	21-ITR	Itraconazole 1 µg/mL
11-TRE	Trehalose	22-VOR	Voriconazole 2 µg/mL
12-DUL	Dulcitol	23-FLU	Fluconazole 64 µg/mL
		24-Growth	Growth control

原理方法

INTEGRAL SYSTEM YEASTS *Plus* allows:

• Presumptive Identification.

依據糖的同化反應,該測試為糖類同化反應是經由評估 well1-GLU至12-DUL的顏色變化進行解釋。陽性和陰性反應組合,可通過代碼表識別酵母菌的名稱
13-CHR 包含顯的培養基,通過評估顏色的變化來區分一些酵母菌。

• Sensitivity to antimycotics.

根據在含有培養基上酵母菌生長的或抑制的試驗評估,含真菌劑抗真菌在14-NY至23-FLU和一個培養基生長指示
紅的到橙的well顏色變化表明酵母菌在檢查下緩慢的增長,和well內抗黴菌的藥物濃度(靈敏度是中間質)
紅的到黃的well顏色變化表明酵母菌在檢查能抵抗酵母菌抗真菌劑在well濃度下生長是有效
well沒有顏色變化表明酵母菌的被檢查抗真菌藥物敏感性的濃度,抗真菌沒有生長在well中
24 well 不含有抗真菌劑,它含有培養基和指標,它可以作為酵母菌的生長控制

COMPOSITION

Table no.2

Well	Content
1-GLU	Culture medium for the assimilation of glucose
2-MAL	Culture medium for the assimilation of maltose
3-SAC	Culture medium for the assimilation of saccharose
4-LAC	Culture medium for the assimilation of lactose
5-GAL	Culture medium for the assimilation of galactose
6-MEL	Culture medium for the assimilation of melibiose
7-CEL	Culture medium for the assimilation of cellobiose
8-INO	Culture medium for the assimilation of inositol
9-XYL	Culture medium for the assimilation of xylose
10-RAF	Culture medium for the assimilation of raffinose
11-TRE	Culture medium for the assimilation of trehalose
12-DUL	Culture medium for the assimilation of dulcitol
13-CHR	Culture medium containing chromogenic substratum
14-NY	Culture medium containing Nistatin - 1.25 µg/mL
15-AMB	Culture medium containing Amphotericin - 2 µg/mL
16-FCY	Culture medium containing Flucytosine - 16 µg/mL
17-ECN	Culture medium containing Econazole - 2 µg/mL
18-KCA	Culture medium containing Ketaconazole – 0.5 µg/mL
19-CLO	Culture medium containing Clotrimazole - 1 µg/mL
20-MIC	Culture medium containing Miconazole - 2 µg/mL
21-ITR	Culture medium containing Itraconazole - 1 µg/mL
22-VOR	Culture medium containing Voriconazole - 2 µg/mL
23-FLU	Culture medium containing Fluconazole - 64 µg/mL
24-Growth	Culture medium for the growth control
Physiological Solution (g/L): Sodium chloride 9 g; Distilled water 1000 mL; pH 6.8 ± 0.2	

收集和儲存檢體**INTEGRAL SYSTEM YEASTS Plus**

用於最重要的臨床酵母菌和對真菌酵母菌的藥物敏感性評估，分離在選擇性培養基酵母菌的分離

操作方法**1) PREPARATION OF THE CELL SUSPENSION 配置細胞懸浮液**

- ※採取一個或多個微生物菌落，加至生理溶液瓶中混合均勻，調成0.5 McFarland 之懸浮液A
- ※分配0.02毫升懸浮液A到包含在試劑盒中與一種生理溶液小瓶之懸浮液B

2) INOCULATION OF THE SYSTEM

- ※將套組放置室溫下
- ※紀錄名稱、日期、微生物起源
- ※插入 xylose disc 在 well 9-XYL
- ※吸取0.2 mL懸浮液A，滴入 1-GLU to 13-CHR
- ※吸取0.2 mL懸浮液B，滴入 14-NY to 24-Growth
- ※除13-CHR，每個well滴一滴凡士林油
- ※需在36±1°C培養48小時

結果解釋**IDENTIFICATION**

- ※圖表3為1-GLU to 12- DUL顏色的判別結果
- ※測試結果表單上寫下得到的結果
- ※在NUMERICAL CODE FORMATION 獲取報告說明4位數字
- ※最後，確定使用代碼表中的微生物
- ※觀察well 13-CHR的顏色變化

Table no.3

Well	IDENTICATION OF YEASTS	Well color	
		Positive reaction	Negative reaction
1-GLU	glucose	yellow-grey	purple
2-MAL	maltose	yellow-grey	purple
3-SAC	saccharose	yellow-grey	purple
4-LAC	lactose	yellow-grey	purple
5-GAL	galactose	yellow-grey	purple
6-MEL	melibiose	yellow-grey	purple
7-CEL	cellobiose	yellow-grey	purple
8-INO	inositol	yellow-grey	purple
9-XYL	xylose	yellow-grey	purple
10-RAF	raffinose	yellow-grey	purple
11-TRE	trehalose	yellow-grey	purple
12-DUL	dulcitol	yellow-grey	purple

NUMERICAL CODE FORMATION

- 1) The 12 biochemical tests are divided into 4 groups, each containing 3 tests and every test is indicated with a positivity value of 1, 2, or 4. 12種生化試驗被分成4組，各含3種試驗和每個測試用反應表示
- value 1 : first positive test of each group (**1-GLU, 4-LAC, 7-CEL, 10-RAF**) – 個的1, 2或4為陽性值
 - value 2 : second positive test of each group (**2-MAL, 5-GAL, 8-INO, 11-TRE**)
 - value 4 : third positive test of each group (**3-SAC, 6-MEL, 9-XYL, 12-DUL**)
 - value 0 : every negative test
- 2) Through the sum in every group of the positive reaction values, a 4 digit code is obtainable, which allows the identification of the microorganism under examination by using the **Table of codes**, as in the following example. 通過每一個組中的陽性反應值的總和，獲得一個4位代碼，根據所使用的代碼鑑定微生物如下面範例

	Group 1			Group 2			Group 3			Group 4		
Test	1-GLU	2-MAL	3-SAC	4-LAC	5-GAL	6-MEL	7-CEL	8-INO	9-XYL	10-RAF	11-TRE	12-DUL
Code of positivity	1	2	4	1	2	4	1	2	4	1	2	4
Results	+	+	+	-	+	-	-	-	+	-	+	-
Sum of codes	7			2			4			2		
CODE	7242			MICROORGANISM			Candida albicans					

TABLE OF REACTIONS

	glucose	maltose	sucrose	lactose	galactose	melibiose	cellobiose	inositol	xylose	raffinose	trehalose	dulcitol
<i>Candida albicans</i>	+	+	+	-	+	-	-	-	+	-	+	-
<i>Candida catenulata</i>	+	+	-	-	+	-	-	-	+	-	-	-
<i>Candida dubliniensis</i>	+	+	+	-	+	-	-	-	-	-	-	-
<i>Candida famata</i>	+	+	+	V	+	+	+	-	+	+	+	V
<i>Candida glabrata</i>	+	-	-	-	-	-	-	-	-	-	+	-
<i>Candida guilliermondii</i>	+	+	+	-	+	+	+	-	+	+	+	+
<i>Candida kefyr</i>	+	-	+	+	+	-	V	-	V	+	V	-
<i>Candida krusei</i>	+	-	-	-	-	-	-	-	-	-	-	-
<i>Candida lambica</i>	+	-	-	-	-	-	-	-	+	-	-	-
<i>Candida lusitanae</i>	+	+	+	-	+	-	+	-	+	-	+	-
<i>Candida parapsilosis</i>	+	+	+	-	+	-	-	-	+	-	-	-
<i>Candida rugosa</i>	+	-	-	-	+	-	-	-	V	-	-	-
<i>Candida tropicalis</i>	+	+	+	-	+	-	V	-	+	-	+	-
<i>Candida zeylanoides</i>	+	-	-	-	V	-	V	-	-	-	+	-
<i>Candida pseudotropicalis</i>	+	-	+	+	+	-	+	-	V	+	-	-
<i>Candida stellatoidea</i>	+	+	-	-	+	-	-	-	+	-	+	-
<i>Cryptococcus neoformans</i>	+	+	+	-	+	-	+	+	+	V	+	+
<i>Cryptococcus albidus</i>	+	+	+	V	V	+	+	+	+	+	+	V
<i>Cryptococcus laurentii</i>	+	+	+	+	+	V	+	+	+	V	+	+
<i>Cryptococcus luteolus</i>	+	+	+	-	+	+	+	+	+	+	+	+
<i>Cryptococcus terreus</i>	+	V	-	V	V	-	+	+	+	-	+	V
<i>Cryptococcus uniguttulatus</i>	+	+	+	-	V	-	V	+	+	V	V	-
<i>Cryptococcus gastricus</i>	+	+	-	V	+	-	+	+	+	-	+	-
<i>Rhodotorula glutinis</i>	+	+	+	-	V	-	+	-	+	+	+	-
<i>Rhodotorula rubra</i>	+	+	+	+	+	-	V	-	+	+	+	-
<i>Saccharomyces cerevisiae</i>	+	+	+	-	+	-	-	-	-	+	V	-
<i>Hansenula anomala</i>	+	+	+	-	+	-	+	-	+	-	+	-
<i>Geotrichum candidum</i>	+	-	-	-	+	-	-	-	+	-	-	-
<i>Blastoschizomyces capitatus</i>	+	-	-	-	+	-	-	-	-	-	-	-
<i>Prototheca wickerhamii</i>	+	-	-	-	+	-	-	-	-	-	+	-
<i>Trichosporon capitatum</i>	+	-	-	-	+	-	-	-	-	-	-	-
<i>Trichosporon pullulans</i>	+	+	+	+	+	+	+	V	V	+	+	-

TABLE OF CODES

CODE	MICROORGANISM	13-WELL COLOR	DIFFERENTIAL CHARACTERISTICS AND MICROSCOPIC MORPHOLOGY ON CORN MEAL AGAR (ref. 11507) AT 25 °C
1000	<i>Candida krusei</i>	PINK	<i>Candida krusei</i> shows extremely long pseudohyphae, rarely ramified; few blastoconids.
1002	<i>Candida zeylanoides</i>	-	<i>Candida zeylanoides</i> shows pseudohyphae, with blastoconids formation.
	<i>Candida glabrata</i>		<i>Candida glabrata</i> shows little spores, without pseudohyphae.
1012	<i>Candida zeylanoides</i>	-	
1040	<i>Candida lambica</i>	-	
1072	<i>Cryptococcus terreus</i>	-	
1076	<i>Cryptococcus terreus</i>	-	
1172	<i>Cryptococcus terreus</i>	-	
1176	<i>Cryptococcus terreus</i>	-	
1200	<i>Trichosporon capitatum</i>	-	<i>Trichosporum capitatum</i> shows hyphae and pseudohyphae, arthroconids and blastoconids.
	<i>Blastoschizomyces capitatus</i>		<i>Blastoschizomyces capitatus</i> shows hyphae and ringconids similar to arthroconids.
	<i>Candida rugosa</i>		<i>Candida rugosa</i> shows pseudohyphae and blastoconids.
1202	<i>Prototheca wickerhamii</i>	-	<i>Prototheca wickerhamii</i> shows spores, without hyphae formation.
	<i>Candida zeylanoides</i>		<i>Candida zeylanoides</i> shows pseudohyphae, with blastoconids formation.
1212	<i>Candida zeylanoides</i>	-	
1240	<i>Geotrichum candidum</i>	-	<i>Geotrichum candidum</i> shows arthroconids.
	<i>Candida rugosa</i>		<i>Candida rugosa</i> shows pseudohyphae and blastoconids.
1272	<i>Cryptococcus terreus</i>	-	
1276	<i>Cryptococcus terreus</i>	-	
1372	<i>Cryptococcus terreus</i>	-	
1376	<i>Cryptococcus terreus</i>	-	
3072	<i>Cryptococcus terreus</i>	-	
3076	<i>Cryptococcus terreus</i>	-	
3172	<i>Cryptococcus terreus</i>	-	
3176	<i>Cryptococcus terreus</i>	-	
3240	<i>Candida catenulata</i>	-	
3242	<i>Candida stellatoidea</i>	-	
3272	<i>Cryptococcus gastricus</i>	-	<i>Cryptococcus gastricus</i> does not grow at 37 °C on Sabouraud Dextrose Agar.
	<i>Cryptococcus terreus</i>	-	<i>Cryptococcus terreus</i> grows at 37 °C on Sabouraud Dextrose Agar.
3276	<i>Cryptococcus terreus</i>	-	
3372	<i>Cryptococcus gastricus</i>	-	<i>Cryptococcus gastricus</i> does not grow at 37 °C on Sabouraud Dextrose Agar.
	<i>Cryptococcus terreus</i>	-	<i>Cryptococcus terreus</i> grows at 37 °C on Sabouraud Dextrose Agar.
3376	<i>Cryptococcus terreus</i>	-	
5303	<i>Candida kefyri</i>	-	
5311	<i>Candida pseudotropicalis</i>	-	<i>Candida pseudotropicalis</i> shows long blastoconids on the pseudohyphae.
	<i>Candida kefyri</i>	-	<i>Candida kefyri</i> shows many long pseudohyphae with long and oval blastoconids.
5313	<i>Candida kefyri</i>	-	
5341	<i>Candida kefyri</i>	-	
5343	<i>Candida kefyri</i>	-	
5351	<i>Candida pseudotropicalis</i>	-	<i>Candida pseudotropicalis</i> shows long blastoconids on the pseudohyphae.
	<i>Candida kefyri</i>	-	<i>Candida kefyri</i> shows many long pseudohyphae with long and oval blastoconids.
5353	<i>Candida kefyri</i>	-	
7053	<i>Rhodotorula glutinis</i>	-	
7060	<i>Cryptococcus uniguttulatus</i>	-	
7061	<i>Cryptococcus uniguttulatus</i>	-	
7062	<i>Cryptococcus uniguttulatus</i>	-	
7063	<i>Cryptococcus uniguttulatus</i>	-	
7070	<i>Cryptococcus uniguttulatus</i>	-	

CODE	MICROORGANISM	13-WELL COLOR	DIFFERENTIAL CHARACTERISTICS AND MICROSCOPIC MORPHOLOGY ON CORN MEAL AGAR (ref. 11507) AT 25 °C
7071	<i>Cryptococcus uniguttulatus</i>	-	
7072	<i>Cryptococcus uniguttulatus</i>	-	
7073	<i>Cryptococcus uniguttulatus</i>	-	
7200	<i>Candida dubliniensis</i>	-	
7201	<i>Saccharomyces cerevisiae</i>	-	
7203	<i>Saccharomyces cerevisiae</i>	-	
7240	<i>Candida parapsilosis</i>	-	
7242	<i>Candida albicans</i>	GREEN	<i>Candida albicans</i> shows pseudohyphae with terminal chlamidospores.
	<i>Candida tropicalis</i>	BLUE	<i>Candida tropicalis</i> shows blastoconids all along the pseudohyphae.
7243	<i>Rhodotorula rubra</i>	-	
7252	<i>Hansenula anomala</i>	-	<i>Hansenula anomala</i> shows blastoconids with ascospores and without pseudohyphae.
	<i>Candida tropicalis</i>	BLUE	<i>Candida tropicalis</i> shows blastoconids all along the pseudohyphae.
	<i>Candida lusitanae</i>	COLORLESS	<i>Candida lusitanae</i> shows short chains of long blastoconids on the curve pseudohyphae.
7253	<i>Rhodotorula rubra</i>	-	<i>Rhodotorula glutinis</i> and <i>Rhodotorula rubra</i> do not form pseudohyphae. <i>Rhodotorula glutinis</i> uses KNO ₃ <i>Rhodotorula rubra</i> does not uses KNO ₃
	<i>Rhodotorula glutinis</i>		
7260	<i>Cryptococcus uniguttulatus</i>	-	
7261	<i>Cryptococcus uniguttulatus</i>	-	
7262	<i>Cryptococcus uniguttulatus</i>	-	
7263	<i>Cryptococcus uniguttulatus</i>	-	
7270	<i>Cryptococcus uniguttulatus</i>	-	
7271	<i>Cryptococcus uniguttulatus</i>	-	
7272	<i>Cryptococcus uniguttulatus</i>	-	
7273	<i>Cryptococcus uniguttulatus</i>	-	
7276	<i>Cryptococcus neoformans</i>	-	
7277	<i>Cryptococcus neoformans</i>	-	
7376	<i>Cryptococcus laurentii</i>	-	
7377	<i>Cryptococcus laurentii</i>	-	
7473	<i>Cryptococcus albidus</i>	-	
7477	<i>Cryptococcus albidus</i>	-	
7573	<i>Cryptococcus albidus</i>	-	
7577	<i>Cryptococcus albidus</i>	-	
7653	<i>Candida famata</i>	-	
7657	<i>Candida guilliermondii</i>	-	<i>Candida guilliermondii</i> forms short pseudohyphae with groups of blastoconids at the septa.
	<i>Candida famata</i>	-	<i>Candida famata</i> does not form pseudohyphae.
7673	<i>Cryptococcus albidus</i>	-	
7677	<i>Cryptococcus luteolus</i>	-	<i>Cryptococcus luteolus</i> uses KNO ₃ .
	<i>Cryptococcus albidus</i>	-	<i>Cryptococcus albidus</i> does not use KNO ₃ .
7713	<i>Trichosporon pullulans</i>	-	
7733	<i>Trichosporon pullulans</i>	-	
7753	<i>Trichosporon pullulans</i>	-	<i>Trichosporon pullulans</i> shows hyphae and pseudohyphae, arthroconids and blastoconids.
	<i>Candida famata</i>	-	<i>Candida famata</i> shows blastoconids, does not form pseudohyphae.
7757	<i>Candida famata</i>	-	
7773	<i>Trichosporon pullulans</i>	-	<i>Trichosporon pullulans</i> shows hyphae and pseudohyphae, arthroconids and blastoconids.
	<i>Cryptococcus albidus</i>	-	<i>Cryptococcus albidus</i> shows dark round spores; does not form hyphae.
7776	<i>Cryptococcus laurentii</i>	-	
7777	<i>Cryptococcus laurentii</i>	-	<i>Cryptococcus laurentii</i> grows at 37 °C on Sabouraud Dextrose Agar.
	<i>Cryptococcus albidus</i>	-	<i>Cryptococcus albidus</i> does not grow at 37 °C on Sabouraud Dextrose Agar.

SENSITIVITY TO ANTIMYCOTICS 抗真菌的靈敏度

觀察well的顏色變化和使用表4號解釋結果
 記下測試結果表的數據

The control well (24-Growth) has to turn yellow (positive result)

Table no.4

WELL COLOR	BACTERIAL GROWTH	INTERPRETATION
Red	Inhibited	S = Sensitive
Orange	Partially inhibited	I = Intermediate
Yellow	Good	R = Resistant

品質管制

Every lot of **INTEGRAL SYSTEM YEASTS *Plus*** is subjected to the quality control using the following reference microorganisms:

<i>Candida albicans</i>	ATCC 90028
<i>Candida krusei</i>	ATCC 6258
<i>Candida tropicalis</i>	ATCC 750
<i>Candida parapsilosis</i>	ATCC 22019

結果不正確因素

接種不良;應用該方法對微生物不屬於酵母菌群
 應用不當的測試程序;不符合溫度和時間

注意事項

INTEGRAL SYSTEM YEASTS *Plus*，現行法例不列為危險，然而請正確使用安全資料表

INTEGRAL SYSTEM YEASTS *Plus*，為體外診斷一次性使用套組，在實驗室中通過適當訓練的人員使用
 使用認可的無菌和安全的方法處理病原體

儲存

保存在2-8 °C環境下，遠離熱源，請在有效期間內使用套組

使用後材料處理

材料已進入與檢體接觸必須淨化，按照在實驗室去污中使用的技術和設備，處置可能受感染的材料

PRESENTATION

Product	Ref.	Packaging
INTEGRAL SYSTEM YEASTS <i>Plus</i>	71822	20 tests
INTEGRAL SYSTEM YEASTS <i>Plus</i>	79822	4 tests

TABLE OF SYMBOLS

IVD <i>In Vitro</i> Diagnostic Medical Device	 Do not reuse	 Manufacturer	 Contains sufficient for <n> tests	 Temperature limitation
REF Catalogue number	 Fragile, handle with care	 Use by	 Caution, consult accompanying documents	LOT Batch code

