

PETRI PLATES READING & VIEWING :

→ A NEED FOR STANDARDISATION

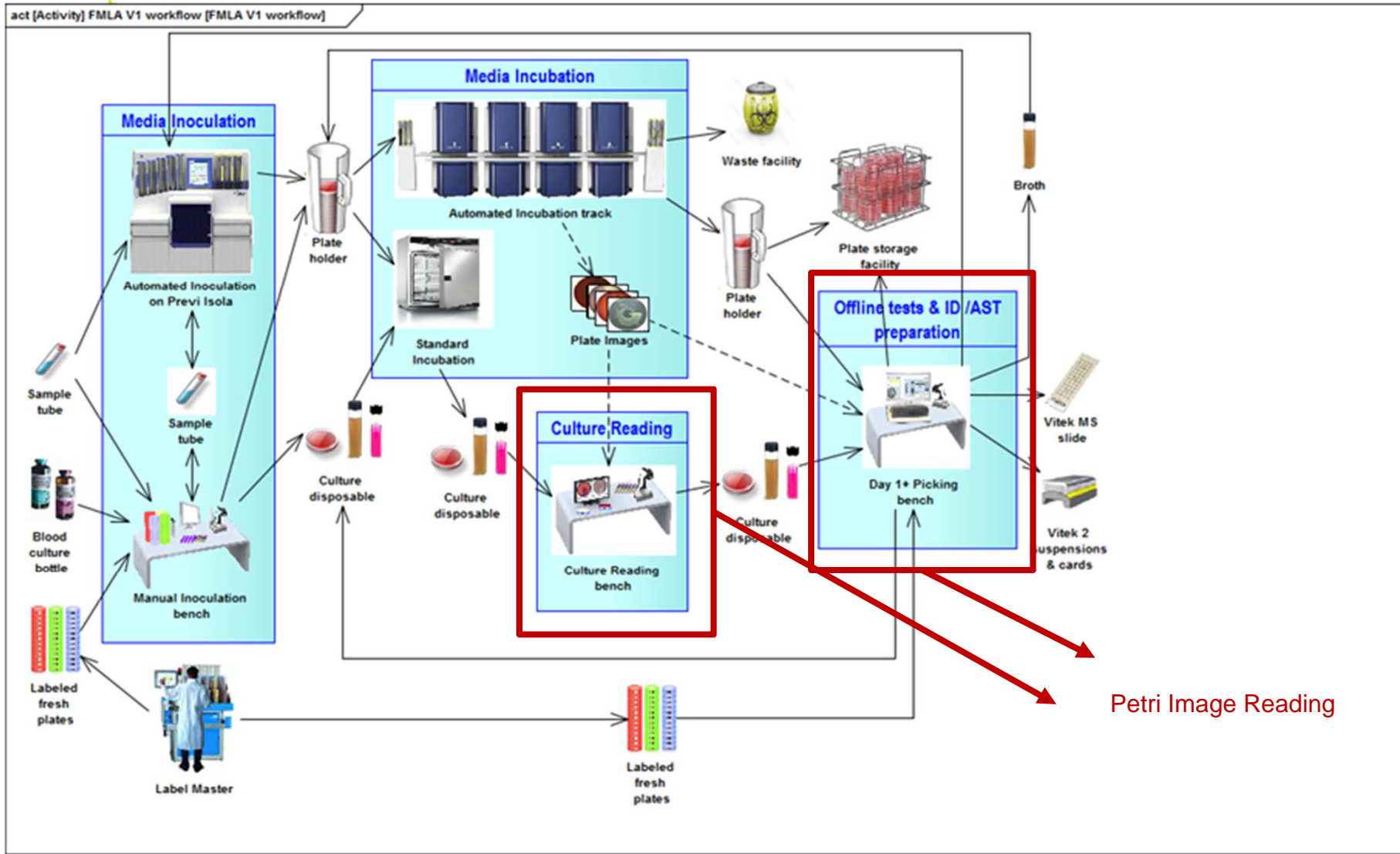
PIONEERING DIAGNOSTICS

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Revision 1



Clinical Imaging & Aided Diagnosis (CIAD)



PPM Plates : Reading Environments

Culture Reading = Reading of petri plates to define « isolates »

Clean Environment where **clinical diagnostic** is performed.

→ ambient room conditions may (to some extent) be controlled

ID / AST Reading = Reading of petri plates to pick « isolates »

Dirty Environment : where **clinical diagnostic** is not necessarily performed

→ ambient room conditions is difficult to control

Mobile Culture Reading = Reading of petri plates out of the Laboratory

Environment : where **clinical diagnostic may be** performed

→ ambient room conditions is difficult to control

Can be build standardized common viewing conditions = Display ICC Output profile ?

Culture Reading : Clinical Diagnostics Screen (I)

Culture Reading

Culture Reading Overview > Culture Reading

Accession ID: -
 Culture ID:

Lab ID: 123456789 Prescription ID: A1518
 Specimen Group / Type: Blood / -
 Collected Date: 7/1/13 3:03 PM

7/1/13 - Blood Culture BacT/ALERT FN Positive g+
 7/1/13 - Gram Stain

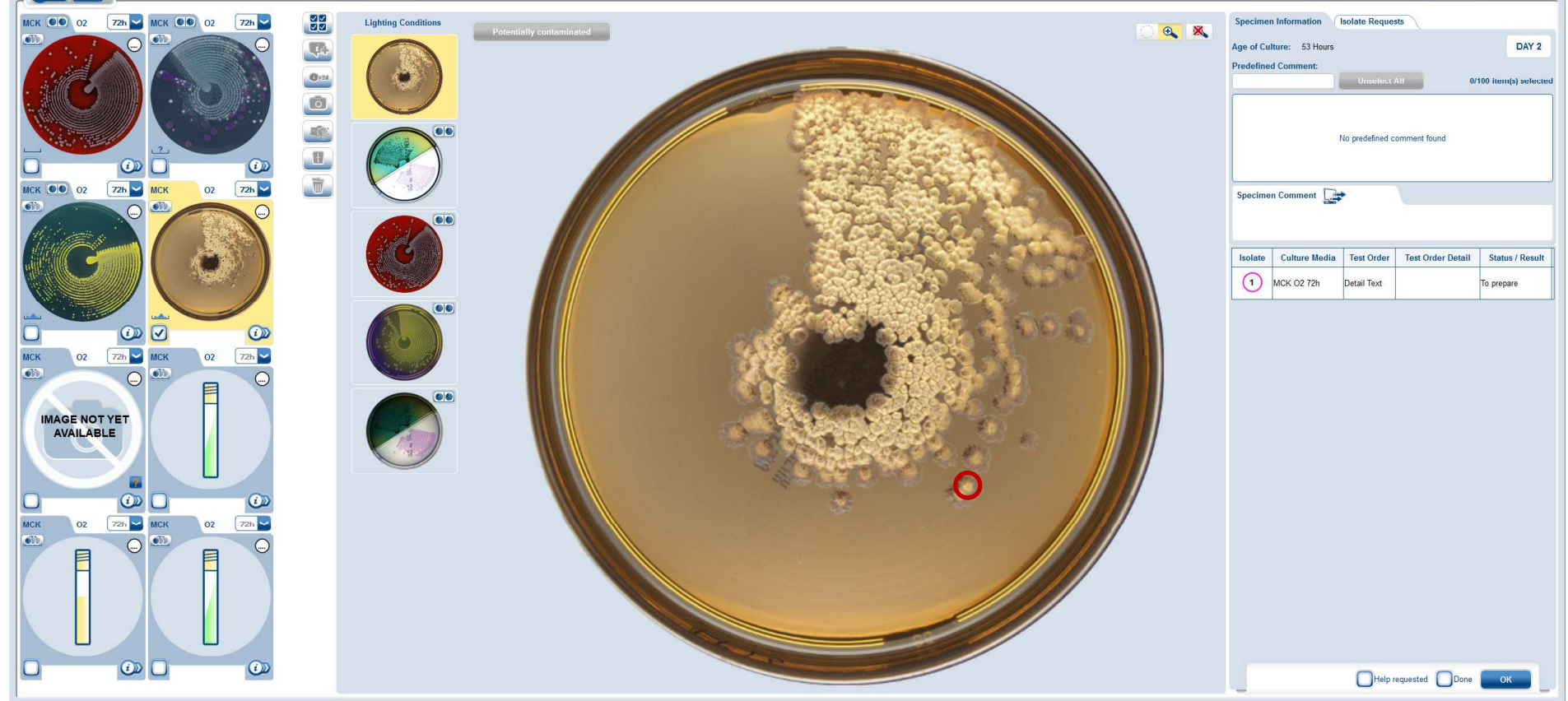
7/1/13 - Urine Salmonella spp
 7/1/13 - Blood Specimen Result2
 7/1/13 - Urine Salmonella spp
 7/1/13 - Blood Specimen Result4

Patient ID: 123456789 Age: 1 Years
 Patient Name: SCHNEIDER Thomas Gender: F

Specimen Information Isolate Requests
 Age of Culture: 53 Hours DAY 2
 Predefined Comment: Unselect All 0/100 Item(s) selected
 No predefined comment found
 Specimen Comment

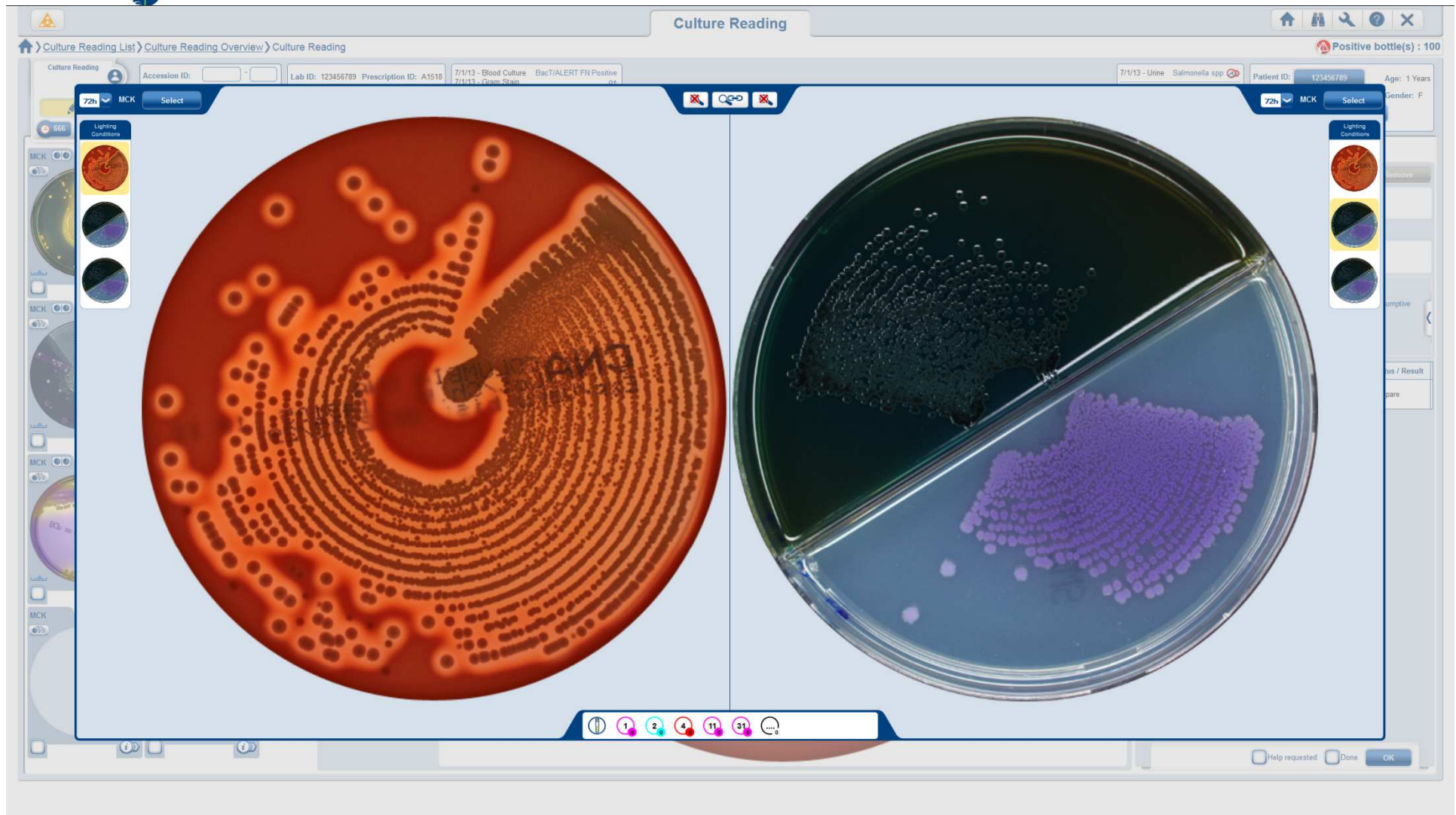
Isolate	Culture Media	Test Order	Test Order Detail	Status / Result
1	MCK O2 72h	Detail Text		To prepare

Help requested Done



- EIZO CG 276 : 16/9 , 27'' (2540 x 1440) w. sRGB gamut
- Default display 1000 x 1000 up to full resolution (in zoom mode) with a « bluish background »

Culture Reading : Clinical Diagnostics Screen (II)



- EIZO CG 276 : 16/9 , 27" (2540 x 1440) w. sRGB gamut
- Default display 1000 x 1000 up to full resolution (in zoom mode) with a « bluish background »

ID / AST : Clinical Diagnostics Screen (II)

bioMérieux - PREVI Sightim Manual Picking Station - V1.0.0

Sample Preparation Configuration

Culture Summary Culture ID: **D13** Lab ID: ATTOS_P1_S13 Activity Bench Name: Blood

Specimen type: blood

Isolate	Tasks	Results
	VITEK 2 ID ID-YST	Quantity : many Shape : Cocci OXIDASE :
	✓ VITEK 2 AST AST-GP	Negative
1	✓ Purity plate C3_C, COS	Gram : Positive
	ⓘ Test OMP	Beta-lactamase : Positive
		Arrangement : Chained
		Manual input :



VITEK® MS

Enter Slide ID:

VITEK® 2

Details

Card Type: ID-YST

Organism ID: No organism ID

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
X	S+													
●	○													

Cassette ID: cds

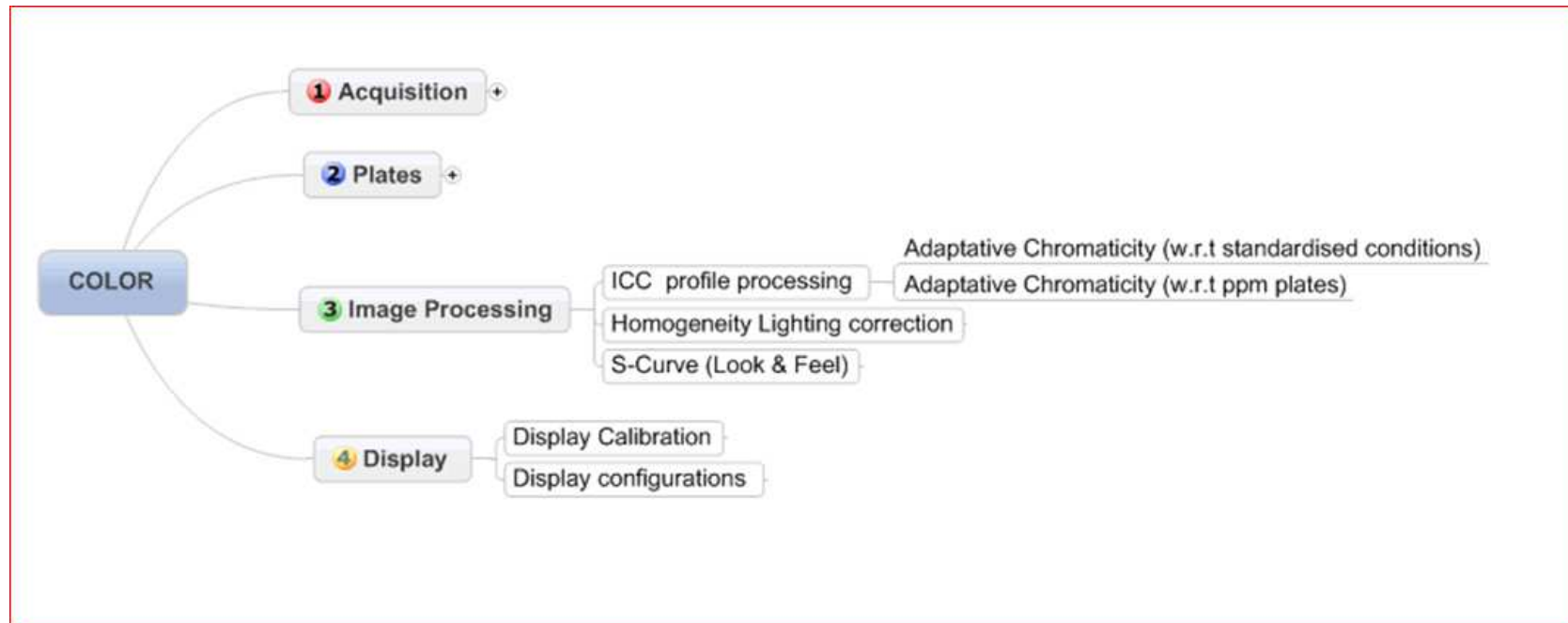
Purity Plate

Agar type	Env.	Culture ID
12 C3_C	ENV	IA00000110

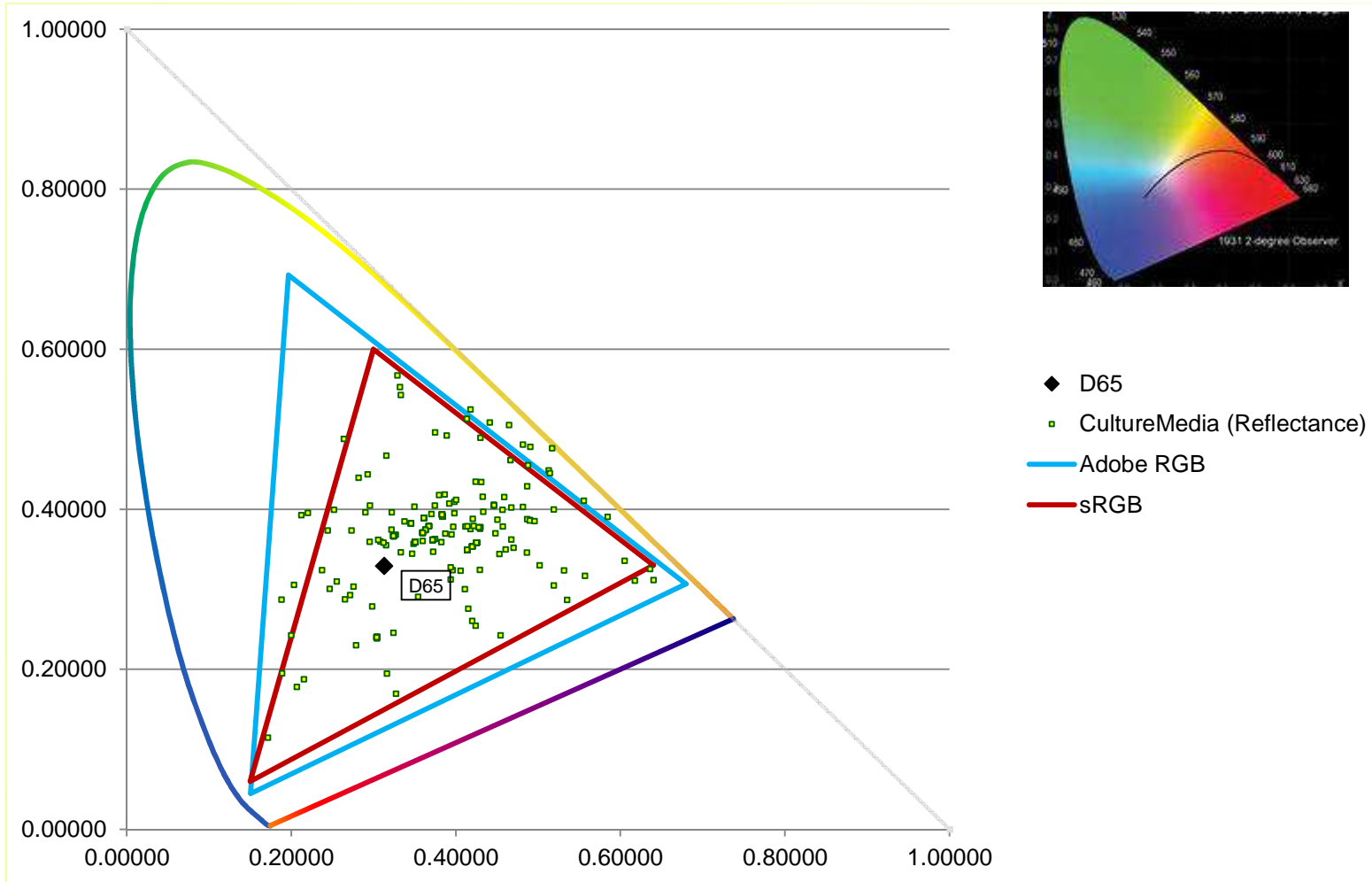
User: fse Bench Name: PREPSTATION1 3:32:41 PM

- ELO Medical 1519 Resolution : **16/9** → 1366 x 768
- Default display **350 x 350** (no zoom mode) with a « **bluish background** »

Petri Plates Reading & Viewing



Media Plates Reflectance & Existing Gamut



Can we define a **standardized** gamut w.r.t. to monitor characteristics ?

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A need for standardisation

Open Points :

1. How should the effect ambient light incorporated and standardized ?
2. How should the effect of the displayed background (chromatic adaptation) standardized with respect to viewing conditions
3. How should the **in/out gamut** of the display w.r.t. to petri optical properties (transmittance & reflectance) shall be standardized ?
4. How should (ie : image format, DICOM ?) output display profile shall be attached to the petri image data in order to display with the same manner on different displays ?

→ **Could mRGB or dRGB color spaces could include these considerations for petri images ?**



Petri Plates Reading & Viewing

THANK YOU FOR YOUR ATTENTION

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