



BAX Q7 PCR System



BAX[®] System Yeast & Mould assay Presentation

BAX® System for Detecting Yeast & Mold

- BAX® PCR assay detects yeast and mold
- Results in 48 hours vs. 5-7 days with culture methods
- Detects 10 cfu/g or greater after 44-hour enrichment
- **Direct testing without enrichment detects >500 cfu/g: Time to result. <5 hours**
- AOAC-RI approved on corn starch, yoghurt and milk based infant formula

Yeast and Mold PCR assay

96 tests per kit

Supplement kit – 96 disrupter tubes + 2 DNA stabilizer tubes

Cell disrupter device



BAX® System Yeast & Mould threshold level protocols


- Enriched protocol
- Direct protocol

BAX® System Yeast & mould threshold level

In order to find the right threshold level, use historical data and in-house BAX® System Yeast & Mould data

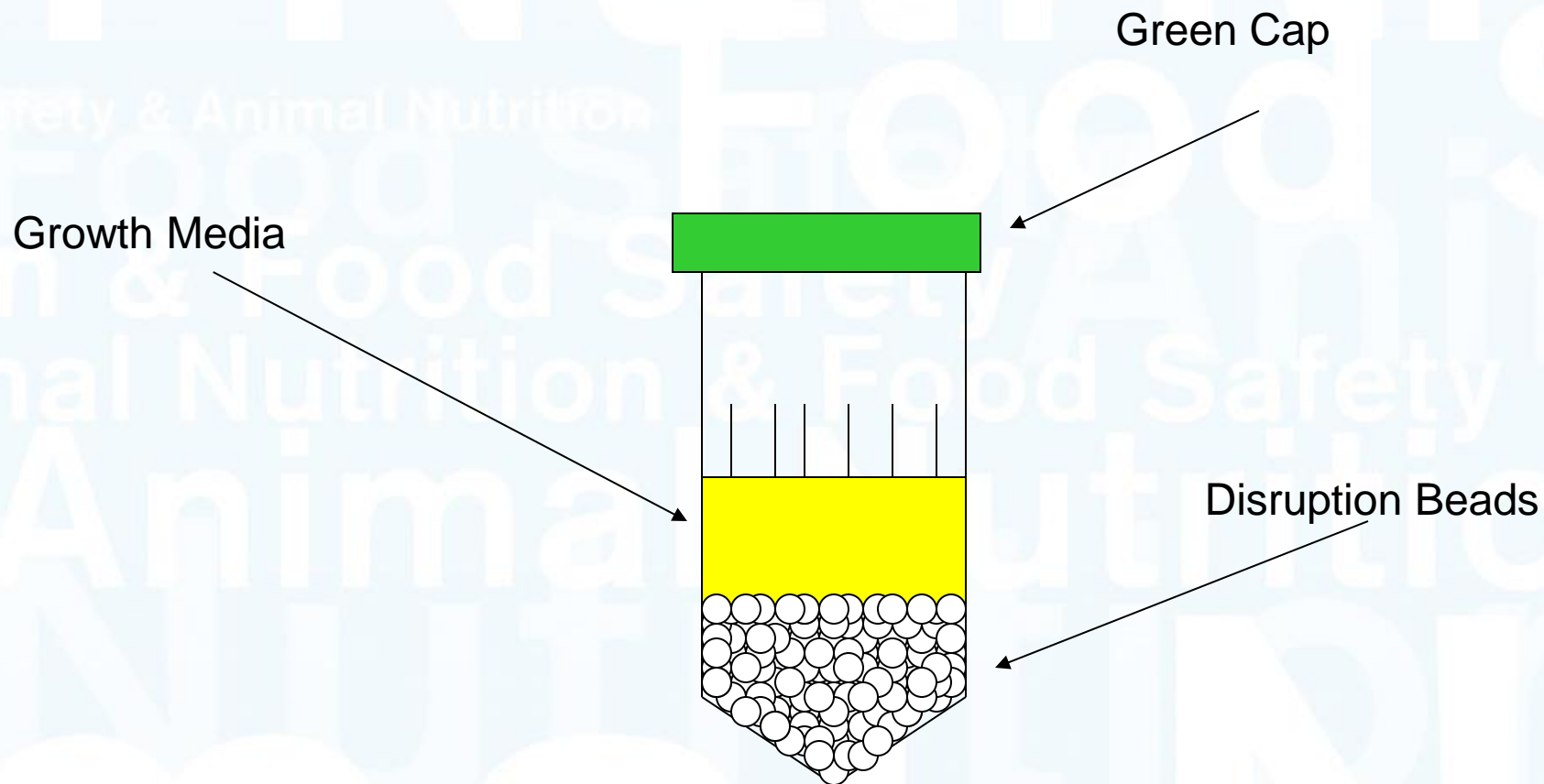
A threshold of e.g. 50 cfu/g will make you able to detect potential Y&M contamination FAST & at a very low level, reducing the level of re-calls:

Samples containing less than 50 cfu/g will be negative 

Samples at or above 50 cfu/g will be positive 

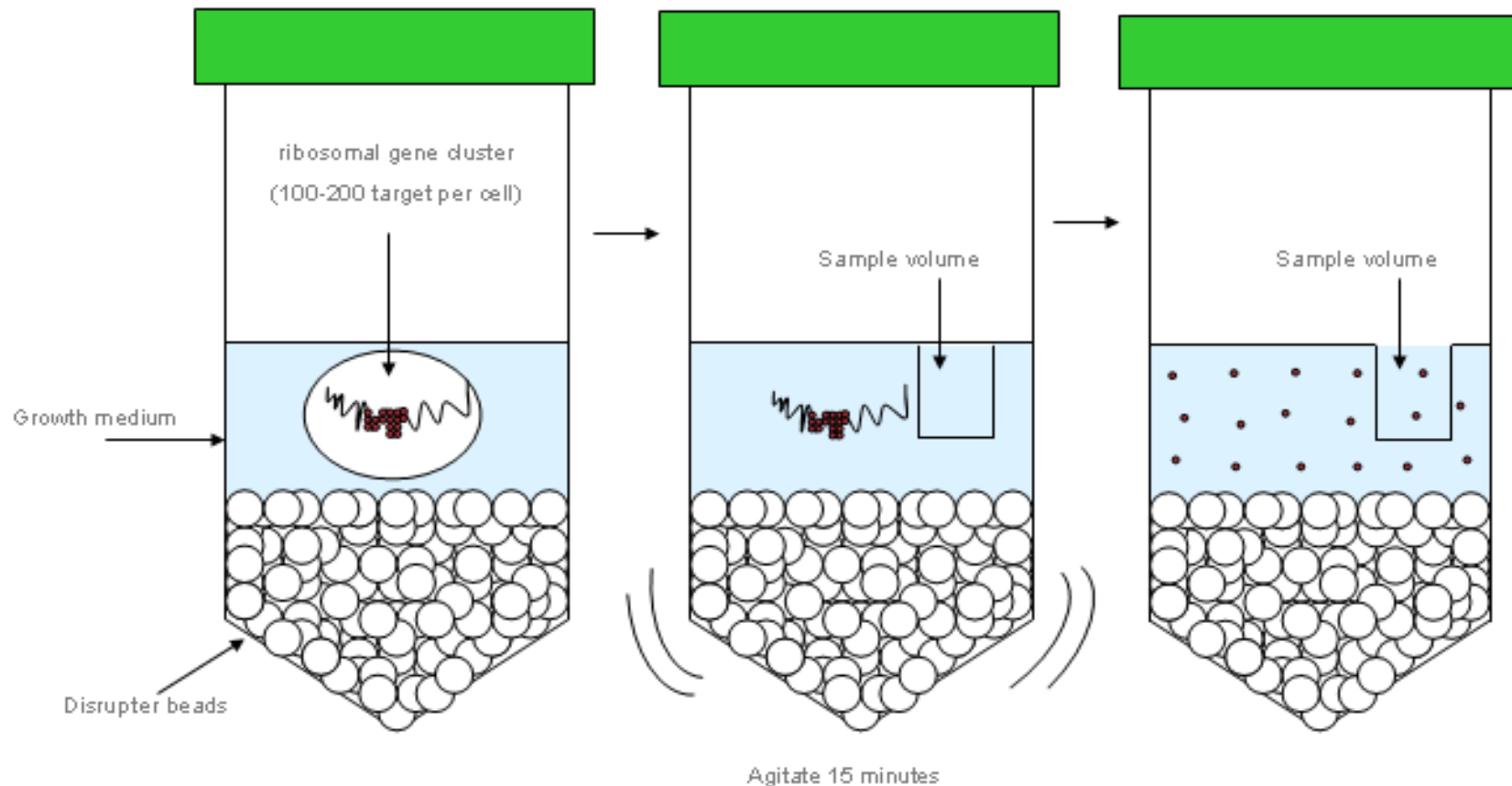
For the Direct protocol, the BAX® software will display a 

BAX® yeast and mold disruption tube.



Cell Disruption Fragments the DNA

Agitate the disrupter tube to fragment the gene cluster

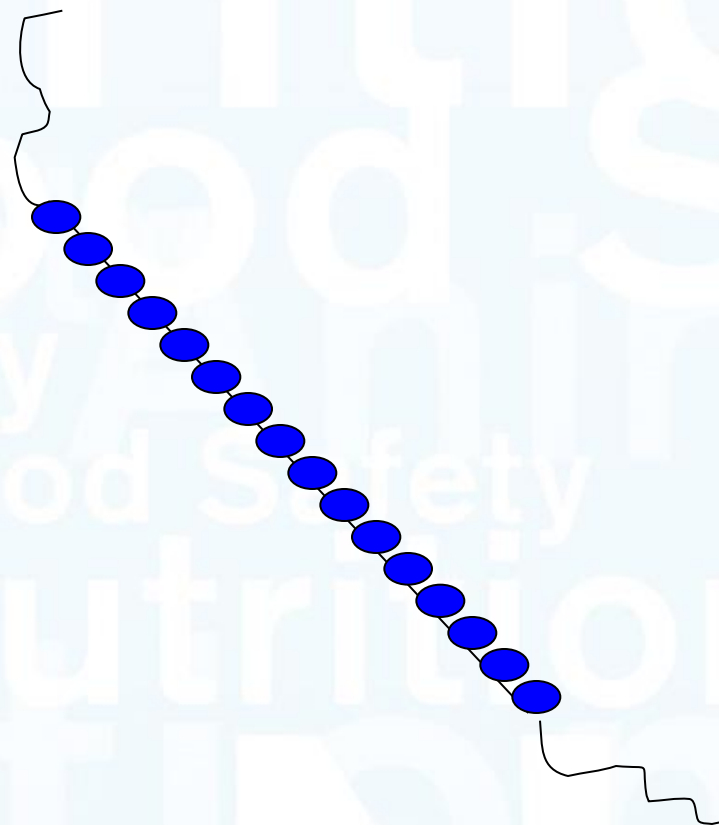


BAX® system uses pan-fungal primers

Targets a portion of the ribosomal RNA (rRNA) gene using pan-fungal primers

The ribosomal gene cluster is repeated in tandem 100-200 times per fungal genome.

100-200 targets per cell, but closely linked on the same strand of DNA.



BAX® System Ready Reference for Yeast & Mold PCR Assay

1. Homogenize sample in 1:10 dilution according to the food type.



2. Determine sample volume to be tested.

(See User Guide or table on back of this reference card.)

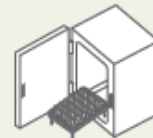
3. Transfer sample to disrupter tube.



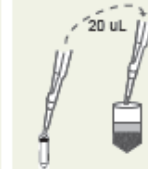
Pooled sample protocol requires triplicate disrupter tubes.

4. Incubate disrupter tubes.

25°C for 44 hours



5. Add DNA stabilizer to disrupter tubes.



DNA stabilizer

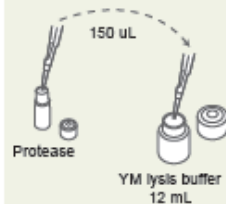
6. Agitate in disrupter device.



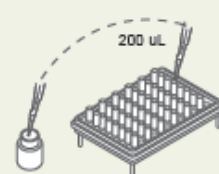
7. Create a rack file.



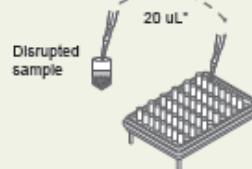
8. Add protease to YM lysis buffer.



9. Transfer lysis reagent to lysis tubes.



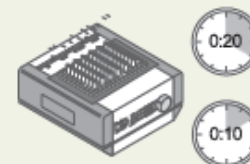
10. Transfer disrupted samples to lysis tubes.



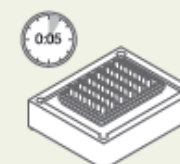
*Pooled sample protocol requires pooled volumes from disrupter tubes into 1 lysis tube.

11. Heat lysis tubes.

37°C for 20 minutes; 95°C for 10 minutes



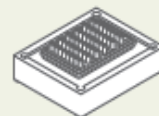
12. Cool lysis tubes in cooling block.



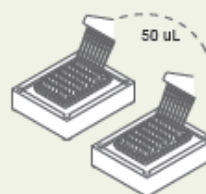
13. Warm up the cycler.



14. Arrange PCR tubes in cooling block.



15. Transfer lysate to PCR tubes.

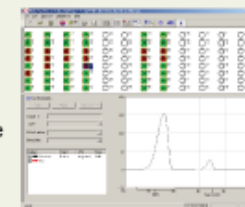


16. Place tubes in cycler and run program.



17. Review results on screen.

- Negative
- Positive
- Indeterminate
- Signal error



BAX® Yeast and Mold assay

Tube contains a growth medium and disruption beads



Sample homogenate is inoculated into disrupter tube.

- For direct test no incubation.
- For enriched test incubate @ 25C for 44 hours.



20ul DNA Stabilizer is added



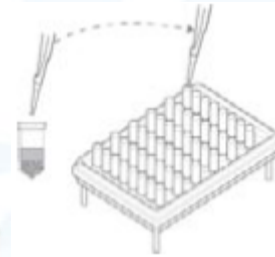
Tubes bead beaten in Disruptor Genie for 15 min.



20ul of disrupted sample added to standard Bax™ lysis and processed as for gram negative bacteria.

Example: BAX® Y&M 50 cfu/g threshold protocol

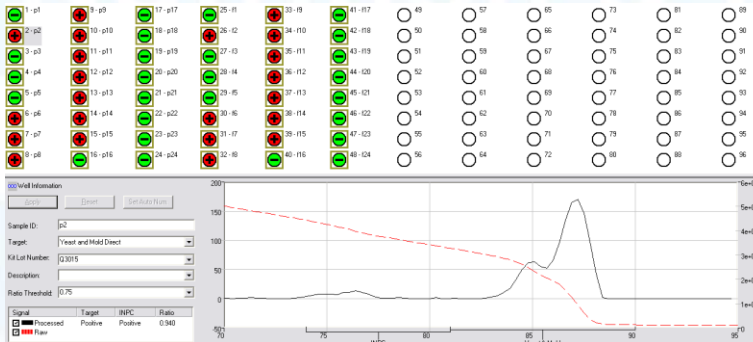
Sample is diluted 1:10



Homogenize sample & transfer 200 uL to disrupter tubes & incubated 44 hours @ 25C

Add DNA stabilizer to disrupter tube and disrupt for 15 minutes in disrupter device

After disruption, 20 uL is added to cluster tubes and run through the lysis protocol in the automated DuPont Thermal Block



Review results



Hydrate the PCR tablets with 50 uL lysate, place the rack into the BAX® System instrument and run the program

BAX® Yeast & Mould enriched samples

1 - almonds	9 - hazelnuts	17	25	33	41	49	57	65	73
2 - almonds	10 - hazelnuts	18	26	34	42	50	58	66	74
3 - almonds	11 - chives	19	27	35	43	51	59	67	75
4 - almonds	12 - chives	20	28	36	44	52	60	68	76
5 - almonds	13 - chives	21	29	37	45	53	61	69	77
6 - hazelnuts	14 - chives	22	30	38	46	54	62	70	78
7 - hazelnuts	15 - chives	23	31	39	47	55	63	71	79
8 - hazelnuts	16 - maximum ...	24	32	40	48	56	64	72	80

Well Information

Apply Reset Set Auto Num.

Sample ID: almonds

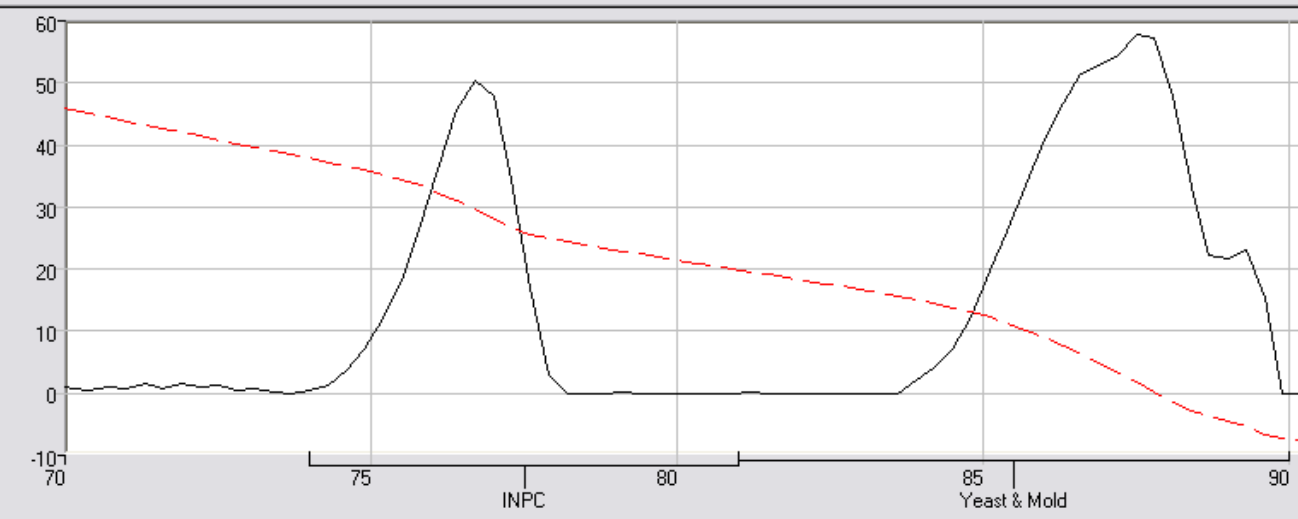
Target: Yeast and Mold Enriched

Kit Lot Number: Q8143

Description: almonds spiked with 100 cfu, 100 ul

Ratio Threshold: 0.00

Signal	Target	INPC	Ratio
<input checked="" type="checkbox"/> Processed	Positive	Positive	0.713
<input checked="" type="checkbox"/> Raw			





Thanks for your attention!

Thomas Pundy
NOACK & Co GmbH