

PIKA FASTORANGE® B ENRICHMENT BOTTLES

Enrichment bottles for the detection of beer spoiling microorganisms

Cat. No. 2036-11

Description	Amount	Storage
Enrichment medium in single use sample bottles for the detection of beer spoiling bacteria and Dekkera (Brettanomyces) yeasts.	15 x 50 mL in cell culture flasks	Store dark at room temperature

Warning! Read the manual and the Safety Data Sheets before starting the analysis. Safety Data Sheets are available in the download area from www.pika-weihenstephan.com. All handling steps should be performed under sterile conditions. Wear appropriate protective clothing.

For *in vitro* use only.

Product description

PIKA FastOrange® B Enrichment bottles are sterile single use flasks which are prefilled with an enrichment medium concentrate. They are easy to use and can be applied directly at the sampling point.

PIKA FastOrange® B Bouillon is a concentrated culture medium which was developed especially to detect microbial contaminations during the brewing process and in brewery products. Acid producing beer spoilers like lactic acid bacteria and Pediococci are easily detected by a color change of the culture medium from violet to yellow.

In case that no other viable microorganisms are present in the sample, also Dekkera (Brettanomyces) yeasts may be detected. For the specific detection of Brettanomyces we recommend FastOrange® BRETT Enrichment Bottles (Cat. No. 2037-11).



Detectable microorganisms

Microorganism	Growth conditions
Lactic acid bacteria (Lactobacillaceae) - Lactobacillus sp. - Pediococcus sp.	aerobic and anaerobic
Acetic acid bacteria (Acetobacteriaceae) - Acetobacter sp. - Gluconobacter sp.	aerobic
Gram negative beer spoiling bacteria, including - Pectinatus sp. - Megasphaera sp.	anaerobic
Beer spoiling yeast, including - Dekkera sp. (Brettanomyces)	aerobic and anaerobic

Growth of brewer's yeast and most other yeasts is suppressed.

Depending on the sample type, the following procedures are recommended

A. Clear samples (e.g. beer, water, filtered samples)

- For optimal color change, add 50 mL of sample into a bottle and mix. The final concentration of the medium is then 50%. The medium doesn't need to be accurately measured, it is sufficient to pour it and visually check the volume with the scale on the sample bottle.
- Lower broth concentrations than 50% may be used, but will result in a decreased visibility of color change. Below a broth concentration of 30%, color change may not occur, but growth can still be monitored by turbidity and/or sediment formation. Compared to 50% broth concentration, time to visible growth may be prolonged if using lower end concentrations.

B. Yeast containing samples (e.g. yeast turbid beer or fermenter sample)

- For an optimal color change, add 30-50 mL of sample into a bottle and mix.
Important! We strictly do NOT recommend using less than 50% final broth concentration for this sample type, otherwise yeast growth will not be sufficiently inhibited. Besides, the color change may become hard to detect or not detectable.
- For incubation, open the lid slightly to allow the release of potentially built gas. Incubate at $25 \pm 2^\circ\text{C}$ for the following time period:

Analysis method	Incubation time
PCR	2-3 days
Visual evaluation	3-7 days

- (Optional) For yeast analysis, serial enrichment often gives best results. We also recommend serial enrichment if the broth color changes to yellow immediately upon mixing sample and medium.

Serial enrichment	Method
Second enrichment	a. After 3 days of enrichment, transfer half of the enriched sample (see B. 1) into a fresh enrichment bottle b. Incubate at $25 \pm 2^\circ\text{C}$ for 3-5 more days

Results of visual evaluation

Sample type	Samples have to be regarded as positive if:
Clear samples	If using 50% of broth 1. Color change from violet-brown to yellow 2. Turbidity/sediment formation
	If other enrichment conditions are used <ul style="list-style-type: none"> ○ Reduced broth concentration below 50% ○ Decreased visibility of color change ○ Increased time to visible growth ○ Below a broth concentration of 20%, no visible color change will occur, but growth can be monitored by turbidity/sediment
Yeast containing samples	Bacteria 1. Color change from violet-brown to yellow 2. Increasing turbidity; often together with a yellowish sediment at the bottom
	Yeasts 1. If a high yeast concentration is present, color change to yellow may occur directly after addition of broth 2. Serial enrichment may be advisable. 3. Evaluation can be achieved by microscopy or PCR analysis,

We recommend

- Microscopic examination or PCR analysis to verify the presence of beer spoiling bacteria in positive enrichments.
- Serial enrichment if an immediate color change occurs after the sample is mixed with broth.

General information

Store the product in the dark at room temperature (max. 25°C). Cooling below 25°C is NOT necessary.

Due to manufacturing, slightly differences in color of culture medium may occur within bottles. This is NOT influencing product quality.

Best before date for unopened product is given on the outer label. After opening we cannot guarantee for shelf life.

The product is not suitable for human or animal consumption. It must not be used for the direct propagation of microorganisms which later are used for food production or might get into contact with food.

FastOrange® B Products

B Bouillon	(12 x 240 mL)	Art.-Nr. 2036-1
B Agar	(12 x 170 mL)	Art.-Nr. 2036-2
B Ready to Use Tubes	(48 x 5 mL) with 48 Swabs	Art.-Nr. 2036-3
B Tubes	(48 x 5 mL)	Art.-Nr. 2036-10
B Enrichment Bottles	(15 x 50 mL)	Art.-Nr. 2036-11



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Notes: The relevant antibiotics/fungicides contained in the medium fall short of critical values that require monitoring or declaration according to regulation (EG) 1907/2006 (REACH). When properly applied, the medium may be disposed of through the normal sewage system. It is strongly recommended to inactivate the live microorganisms in any enriched sample by heating to 121°C/250°F for 20 min (autoclave) to exclude a release of live microorganisms. Although this information was collected thoroughly, we cannot guarantee that any of the content is incomplete or incorrect. We do not take over any warranty for consequences which are resulting from improper handling or incorrect use of this product. Additionally, always comply with the applicable laws, regulations and directives of your country. PIKA Weihenstephan® and FastOrange® are registered trademarks in Germany and other countries.