

FastOrange®

Use as a substitute for other enrichment media

Generally, in all FastOrange® product lines there are both liquid media and agar media available. For a full products list, refer to attachment 1.

The use of FastOrange® bouillon is always favored compared to agar media. The two major reasons are

1. The sample volume which can be analyzed is 50 mL in liquid enrichment instead of 0.5 mL maximum on an agar plate.
2. The survival rate and growth to visible cfu of spoiler cells can be down to 20-50% when plating, while in liquid enrichment 80-95 % of spoiler cells survive and proliferate up to visible growth.

Considering 1. + 2. together makes a difference in detection limits of up to a 200-fold improvement when using FastOrange® liquid enrichments instead of traditional agar plating.

Question yourself: Why are you using agar plating?

1. Do you really need to see and count cfu, or
2. is your goal to detect spoilers in a safe way?

If you want an answer how to detect spoilers in a safe way, then use a large sample volume and do liquid enrichments. The FastOrange® media make spoiler detection easy due to the color change, and especially the liquid media allow an extremely high survival rate of even sublethally damaged spoiler cells.

General user recommendation for FastOrange® use:

Mix your liquid sample in a sterile flask or tube with FastOrange® bouillon in a 50:50 ratio, incubate at $25\text{ °C} \pm 2\text{ °C}$ and watch for growth by color change, turbidity/haze formation, or sediment. FastOrange® is available in different volume formats, conveniently supplying sterile single use units for each purpose.

FastOrange® can be equally used for all brewery samples, both for clear/filtered samples, and for all yeast containing process stages.

Ideally, confirm positive results from enrichments by PCR testing. All FastOrange® media are PCR certified and match perfectly with 4e® For everyone Detection kits from PIKA Weihenstephan.

4e® Detection kits are available for all beer spoiling bacteria and yeasts, refer to attachment 2.

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When you plan to make a change from traditional plating methods to FastOrange®, use the following equivalents:

Targeted spoilers	Medium to be substituted	FastOrange® substitute
Lactobacillus and Pediococcus	HLP Hsu's Lactobacillus and Pediococcus medium	FastOrange® B Bouillon or FastOrange® B Agar. Direct equivalent to HLP tubes: Add liquid sample into a sterile tube and add melted FastOrange® B Agar into tube in a 50:50 ratio, mix and incubate
Selective bacteria in breweries and fermentations	WLD Wallerstein Laboratories Differential Medium	FastOrange® B Bouillon or FastOrange® B Agar
Wild Yeasts	Lin's Cupric Sulfate Medium	FastOrange® Yeast Bouillon or Yeast Agar with Copper Sulphate
Wild Yeasts	Lin's Wild Yeast Medium Crystal Violet (We don't recommend crystal violet medium due to a high rate of misinterpretation)	FastOrange® Yeast Bouillon or Yeast Agar with Copper Sulphate. <i>New product: STA Bouillon or Agar - will soon be available</i>
Yeasts and Molds	SDA Sabouraud Dextrose Agar with cycloheximide	FastOrange® Yeast Bouillon or Yeast Agar

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Attachment 1: FastOrange® Products list

Item number	Item name	Volume per unit
PI-2036-1	PIKA FastOrange® B Bouillon	12 x 240 mL
PI-2036-11	PIKA FastOrange® B Enrichment bottles	15 x 50 mL
PI-2036-10	PIKA FastOrange® B Tubes 48-pack	48 x 5 mL
PI-2036-15	PIKA FastOrange® B Tubes 24-pack	24 x 5 mL
PI-2036-13	PIKA FastOrange® B Tubes 2-pack	2 x 5 mL
PI-2036-2	PIKA FastOrange® B Agar	12 x 170 mL
PI-2036-3	PIKA FastOrange® B Ready to Use Tubes 48-pack	48 x 5 mL FastOrange® B Ready to Use + 48 sterile swabs
PI-2036-14	PIKA FastOrange® B Ready to Use Tubes 24-pack	24 x 5 mL FastOrange® B Ready to Use + 24 sterile swabs
PI-2036-12	PIKA FastOrange® B Hygiene Swabs 2-pack	2 x 5 mL FastOrange® B Ready to Use + 2 sterile swabs
PI-2038-1	PIKA FastOrange® Yeast Bouillon	12 x 240 mL
PI-2038-11	PIKA FastOrange® Yeast Enrichment bottles	15 x 40 mL
PI-2038-2	PIKA FastOrange® Yeast Agar	12 x 170 mL
PI-2037-1	PIKA FastOrange® BRETT Bouillon	12 x 240 mL
PI-2037-11	PIKA FastOrange® BRETT Enrichment bottles	15 x 40 mL
PI-2037-10	PIKA FastOrange® BRETT Tubes 48-pack	48 x 5 mL
PI-2037-11	PIKA FastOrange® BRETT Tubes 24-pack	24 x 5 mL
PI-2037-2	PIKA FastOrange® BRETT Agar	12 x 170 mL

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Attachment 2: 4e® For everyone Detection Kits products list

Item number		Target Microorganism(s)	Reactions per kit
PI-2401-154e	Detection Kit B	Acetics Screening	48
PI-2401-164e	Detection Kit B	Alicyclobacillus acidoterrestris	48
PI-2401-184e	Detection Kit B	Alicyclobacillus sp. Screening	48
PI-2401-324e	Detection Kit B	Lactobacillaceae Screening	48
PI-2401-524e	Detection Kit B	Lactobacillus acetotolerans	48
PI-2401-174e	Detection Kit B	Lactobacillus backii	48
PI-2401-124e	Detection Kit B	Lactobacillus brevis	48
PI-2401-134e	Detection Kit B	Lactobacillus casei	48
PI-2401-144e	Detection Kit B	Lactobacillus collinoides	48
PI-2401-254e	Detection Kit B	Lactobacillus coryniformis	48
PI-2401-274e	Detection Kit B	Lactobacillus lindneri	48
PI-2401-264e	Detection Kit B	Lactobacillus parabuchneri ("frigidus")	48
PI-2401-534e	Detection Kit B	Lactobacillus paracasei	48
PI-2401-284e	Detection Kit B	Lactobacillus perolens	48
PI-2401-294e	Detection Kit B	Lactobacillus plantarum	48
PI-2401-304e	Detection Kit B	Lactobacillus rossiae	48
PI-2401-374e	Detection Kit B	LP Identification (the real beer spoilers)	6 x 12
PI-2401-384e	Detection Kit B	LP Screening (the real beer spoilers)	48
PI-2401-414e	Detection Kit B	Megasphaera sp. Screening	48
PI-2401-444e	Detection Kit B	Pectinatus sp. Screening	48
PI-2401-454e	Detection Kit B	Pediococcus damnosus/inopinatus	48
PI-2402-554e	Detection Kit Y	Dekkera (Brettanomyces) anomala	48
PI-2402-544e	Detection Kit Y	Dekkera (Brettanomyces) bruxellensis	48
PI-2402-564e	Detection Kit Y	Dekkera (Brettanomyces) naardenensis	48
PI-2402-204e	Detection Kit Y	Dekkera (Brettanomyces) sp. Screening	48
PI-2402-494e	Detection Kit Y	Saccharomyces cerevisiae var. diastaticus	48
PI-2403-224e	Detection Kit YM	Fusarium sp. Screening	48
PI-2404-234e	Detection Kit M	Yeast&Mold Screening	48

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