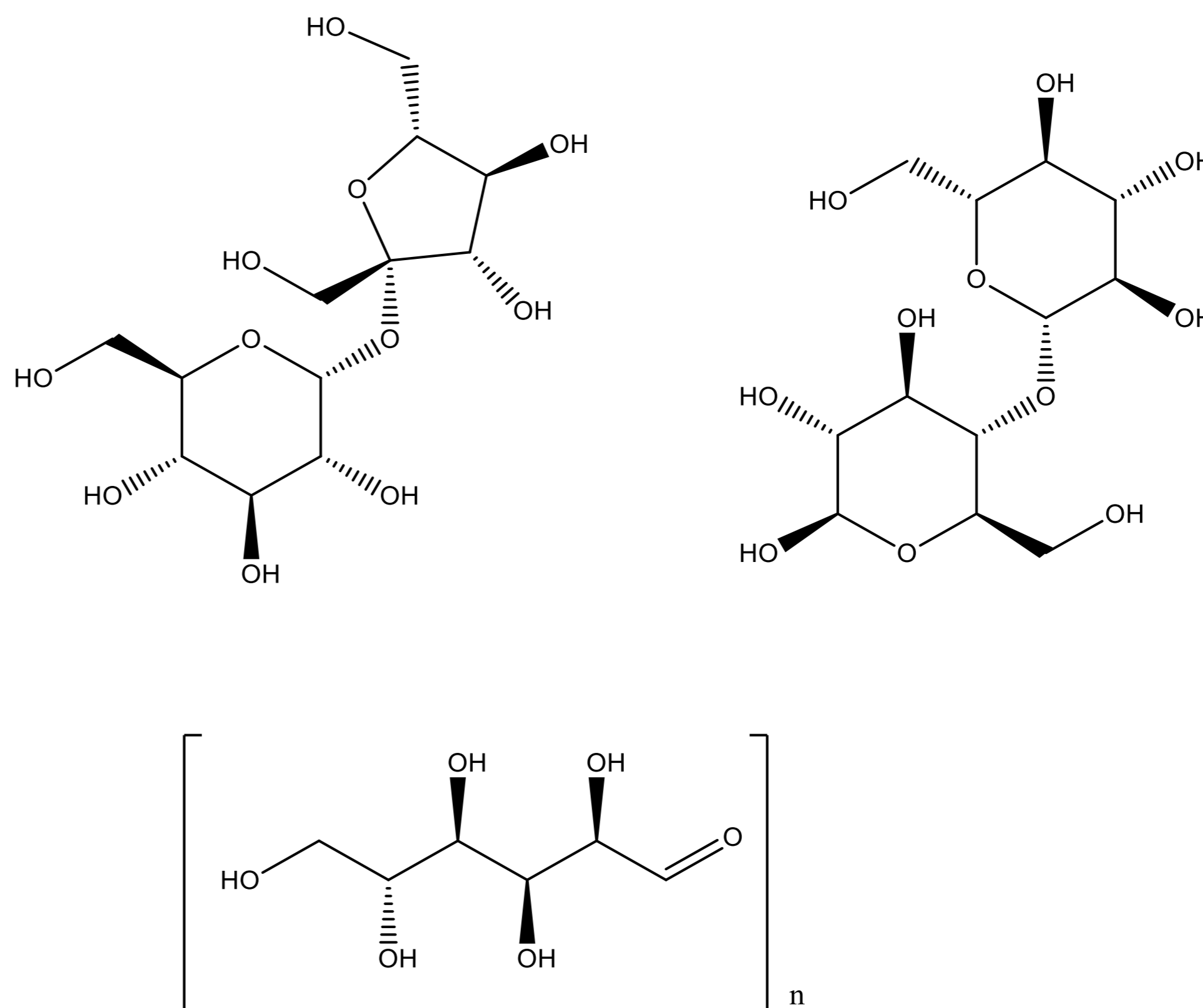


Applications

Phosphorylases catalyses the addition of a phosphate group from an inorganic phosphate (phosphate+hydrogen) to an acceptor. There are 2 types of phosphorylase enzymes Nucleotidyltransferases and Glycosyltransferases. This kit is predominantly composed of a diverse range of Glycosyltransferases.

Substrate Range

A wide range of substrates containing glucose molecules. A selection is shown to the right.



Kit description

The kit contains 25 diverse pre-formulated Phosphorylase (PPL) biocatalysts as lyophilised powders, as well as pre-prepared phosphate buffer.

PPLs contained in the screening kit:

PPL-101	PPL-109	PPL-117	PPL-125
PPL-102	PPL-110	PPL-118	
PPL-103	PPL-111	PPL-119	
PPL-104	PPL-112	PPL-120	
PPL-105	PPL-113	PPL-121	
PPL-106	PPL-114	PPL-122	
PPL-107	PPL-115	PPL-123	
PPL-108	PPL-116	PPL-124	

Contents

Phosphorylases	25 vials lyophilised powder (50 mg each)
DMSO	2 vials (2 x 10 mL)
0.05 M Tris buffer (pH 7)	1 bottle (200 mL)

Screening Procedure

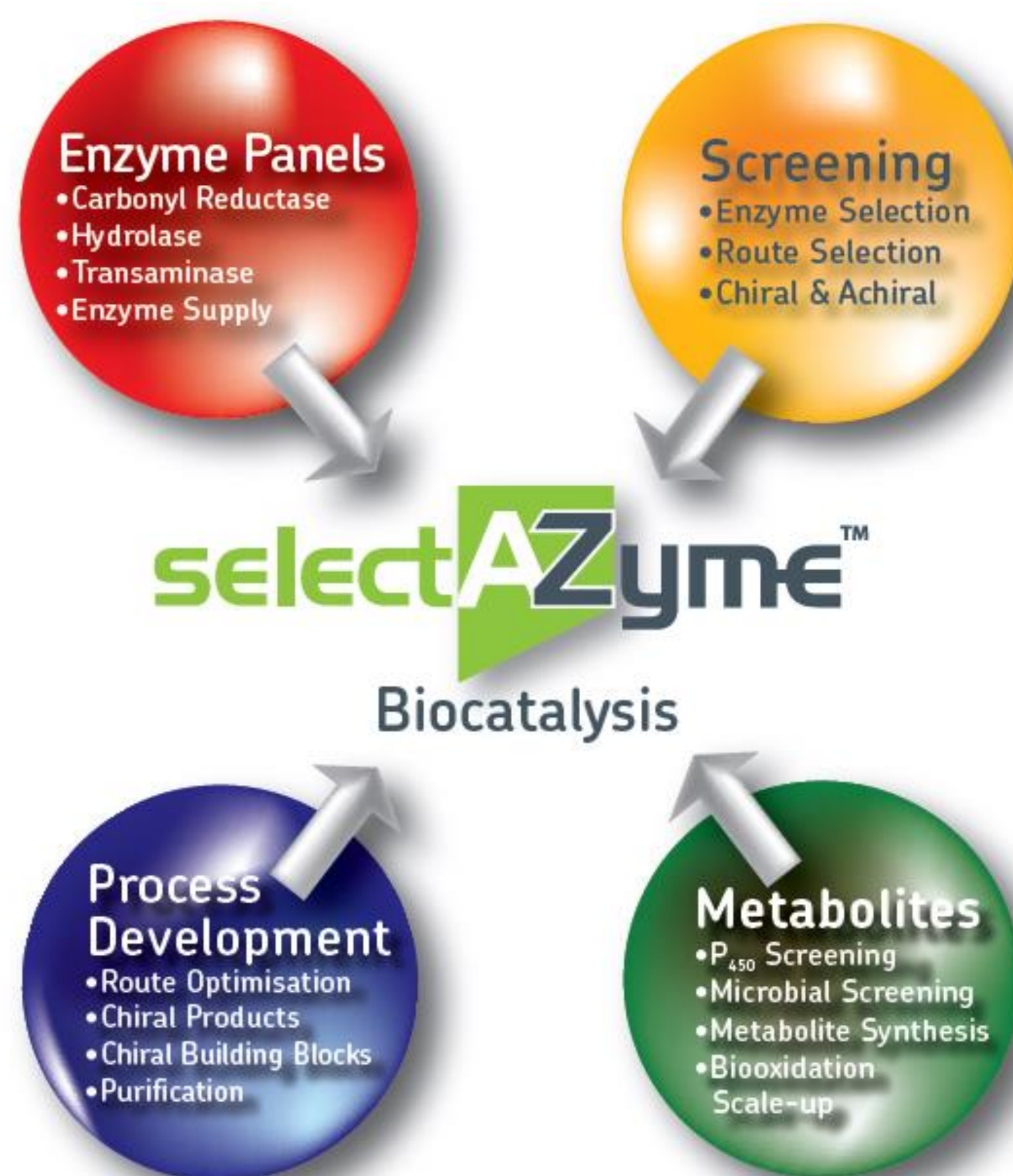
1. Label 25 x 1.5 mL tubes corresponding to the different PPLs provided in the kit (listed in the table above) and add 10 mg of the corresponding enzyme .
2. Once dissolved, add 500 uL of a solution with ~1 mg/mL of substrate 0.1M Tris buffer (pH 7.4). If needed, organic solvent such as DMSO or MTBE can be use to solubilize the substrate (5-10% of the final volume).
3. Shake at room temperature (or ideally 28 °C). Agitate overnight.
4. Extract product with an organic solvent (MTBE, EtOAc etc.).
5. Analyse sample by GC/HPLC to determine conversion and product ee.

Storage: The screening kit should be stored in a refrigerator at 4 °C to preserve enzyme activity.

Phosphorylase (PESK-2500) Enzyme Screening Kit PESK-2500 (50 mg)

selectAZyme Offerings

- An ever-expanding biocatalysis team including molecular and microbiologists, enzymologists, bioinformaticians, organic chemists and analysts, all equipped with state-of-the art facilities.
- Expertise in gene identification, expression, fermentation and enzyme production, followed by the efficient use of enzymes to produce complex chiral APIs.
- Enzyme evolution based on computational re-design, semi-rational and random mutagenesis approaches, allowing access to bespoke biocatalysts with enhanced activity, selectivity and process robustness.
- Fully integrated biocatalyst development through screening, (chemo-) enzymatic route definition, process development and scale up (pilot plant facilities available).
- Rapid implementation of enzymatic steps in complex, multi-stage syntheses, leading to significant improvements in production yields and timelines.
- A simple business model that avoids IP issues.



The selectAZyme Range of Enzyme Screening Kits

Our unique selectAZyme platform offers a range of enzymes suitable for carrying out a wide variety of chemical reactions. Our biocatalysts are prepared in easy to use kits for rapid customer evaluation without any IP issues. These include the following:

Carbonyl Reductase (CRED) biocatalysts

>300 CREDs for the production of chiral alcohols from pro-chiral ketones

Hydrolase biocatalysts

>100 hydrolases for selective hydrolysis in aqueous media, selective acylation in non-aqueous media, resolution of secondary alcohols, amines and thiols, formation of peptides

Nitrilase biocatalysts

>200 nitrilases for the synthesis of carboxylic acids by enzymatic hydrolysis of nitriles

Transaminase (TAm) biocatalysts

>200 TAmS for the production of chiral amines by asymmetric synthesis from pro-chiral ketones or resolution of racemic amines

Ene Reductase (ERED) biocatalysts

>200 EREDs for asymmetric reduction of activated alkenes

For the full range of enzyme screening kits on offer, please check the Almac website

Want Almac to do the screening for you?

- Our experienced biocatalysis team can screen all of our enzymes against your target substrate(s) and simply provide the results.
- Flexible options for subsequent enzyme supply, evolution services, process development and scale up as required.

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