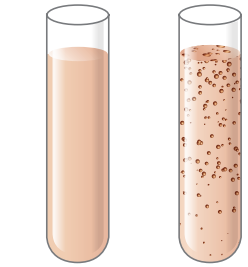
Overview of enzymation: Tropical fruits

	Product	Description	Application	Dosage (mL/1000 kg or mL/1000 L)
Degradation of pectins and colloids	**Citrolase® TF CLEAR**	Mix of pectinases with special hemicellulases	Clear juices of mango, banana, guava, papaya, etc.	10 – 500
	Frutase PL	Pure pectin lyase	Viscosity decline in cloudy citrus juices	10 – 30
	Frutase Citrus Cloudy	Pectin lyase and cellulase-hemicellulase	Extraction of citrus peels	20 – 200
	Citrolase TS	Purified pectinase	Reduction of viscosity in citrus-pulp-wash	10 – 50
	Fructozym® P6-L	Concentrated pectinase und arabanase for juice clarification	Pectin breakdown in sour juices	10 – 30
	Fructozym® FLUX	Broad spectrum pectinase, rich in hemicellulase and glucanase	Optimized filtering of fruit juice and cider; cleaning of crossflow-filter systems	10 – 50
	Fructozym® UF	Pectinase and acidic protease	Improved stability at high protein levels	50 – 200
Starch break-down	**EnerZyme® HT**	Concentrated glucoamylase	Starch breakdown and saccharification	5 – 200
	Fructamyl® FHT	Alpha-amylase for hot-clarification	Good effect at low pH-levels (< pH 3.2); prevention of filamentous cloudiness	5 – 200

Alcohol-test

- Pour 5 mL juice sample in a test tube (in diluted juices, accordingly more)
- Add 5 mL ethanol (96 %)
- Mix sample carefully; do not shake!
- Look out for quick rising bubbles/ wait for a few minutes



Pectin-free Not pectin-free

Pectin-proof

- A floating gel indicates higher amounts of pectin
- Slowly rising bubbles are an indicator of residual pectin

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Overview of clarification and stabilization: Tropical fruits

	Product	Description	Application	Dosage (g or mL/1000 L)
Clarification and stabilization	**Akticol FA-UF**	Activated carbon from plants for decolouration of beverages, free from coarse particles	Decolouration and stabilization in crossflow-filter systems	450 – 1500
	Ercarbon SH	Activated carbon from plants for stabilization of beverages	Polyphenol adsorption and stabilization of colour	200 – 500
	Aktivit	Granulated bentonite for beverage treatment	Protein-fining and clarification	500 – 2500
	Blancobent UF	Special bentonite, free from coarse particles	In-line stabilization in crossflow-filter systems	500 – 2500
	ErbiGel®	Fining-gelatine	Tannin adsorption	50 – 400
	FloraClair®	Vegetable fining-protein	Tannin adsorption, suitable for Halal, Kosher and vegan products	50 – 600
	Klar-Sol 30	Alkaline silica sol for beverage treatment	Complexation of protein and excess gelatin	1500 – 3500
	Klar-Sol Super	Acidic silica sol for beverage treatment	Complexation of protein and excess gelatin at pH < 3.2	1500 – 3500
	Tannivin® Galléol	Fully hydrolyzable tannin from oak apples	Beverage-fining	20 – 50
Pressing aid	**Trub-ex Neu**	Long-fibre cellulose for solid-liquid- separation	Pressing-aid for juice extraction from puree	1 – 3 %

Iodine-test

- Pour approx. 10 mL of sample in a test-tube
- Let a few drops of iodine-solution (0.01– 0.05 N) run down at the inside of the test-tube wall
- Observe the interface between iodine-solution and sample

Starch-proof

- Intensive blue/black colour indicates high amount of starch
- Dark distinct interface indicates residual starch (see picture)
- Even red-brown colour indicates absence of starch

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