Technical Data Sheet

GranuCult™
Yeast Extract Agar
acc. ISO 6222

Ordering number: 1.13116.0500

For determination of the total microbial content from water and other materials.

This culture medium complies with the specifications given by EN ISO 6222.

Mode of Action

This medium does not contain any inhibitors or indicators and it is relatively rich in its nutrients. The enzymatic digest of casein (tryptone) is a nitrogen source containing a high level of free amino acids and yeast extract primarily supplies the B-complex vitamins whilst agar is the solidifying agent.

Typical Composition

Specified by ISO 6222		GranuCult™ Yeast Extract Agar acc. ISO 6222	
Tryptone (Peptone from Casein, Pancreatic)	6 g/l	Enzymatic Digest of Casein	6 g/l
Dehydrated Yeast Extract	3 g/l	Yeast Extract	3 g/l
Agar	10-20 g/l	Agar-Agar*	15 g/l
Water	1000 ml/l	Water	n/a
pH at 25 °C	7.2 ± 0.2	pH at 25 °C	7.2 ± 0.2

* Agar-Agar is equivalent to other different terms of agar.

Preparation

Dissolve 24 g in 1 l of purified water. Heat in boiling water and agitate frequently until completely dissolved. Autoclave 15 min at 121 °C.

If the medium is to be used immediately for poured plate technique, cool it to 44-47 °C in a water bath before use. Use the molten medium as soon as possible, it should not be retained for more than 4 h, as specified by EN ISO 6222 and EN ISO 11133.

The prepared medium is clear and yellowish to yellowish-brown.

Experimental Procedure and Evaluation

Depend on the purpose for which the medium is used.

According EN ISO 6222, place a volume of the test samples (or its dilution) not exceeding 2 ml in the Petri dish, add 15-20 ml of the molten and mix carefully by gentle rotation. Allow the medium to set.

Time between addition of the test sample (or its dilution) and addition of the molten agar shall not exceed 15 min. Inoculate at least one plate for incubation at each temperature.

Invert the plates and incubate one set at 34-38 °C for 40-48 h. Incubate the other set at 20-24 °C for 64-72 h.

Examine the plates as soon as they are removed from the incubators, if this is not possible, store them at +2 °C to +8 °C and examine them within 48 h. Reject every plate with confluent growth.

Storage

Store at +15 °C to +25°C, dry and tightly closed. Do not use clumped or discolored medium. Protect from UV light (including sun light). For *in vitro* use only.

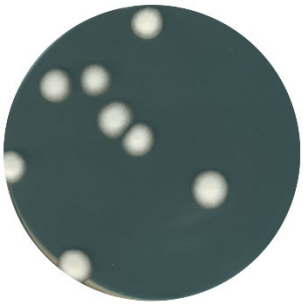
According to Corry et al. (2012), self-prepared medium can be stored in bottles at room temperature in the dark and protected against evaporation for up to one month.

Quality Control

Function	Control strains	Incubation	Reference medium	Method of control	Expected results
Productivity	*Bacillus subtilis* ATCC® 6633	40-48 h at 34-38 °C	Previously validated batch of Yeast extract agar acc. ISO 6222 (YEA)	Quantitative	Recovery ≥ 70 %
	Escherichia coli ATCC® 8739				
	Escherichia coli ATCC® 25922				
	Pseudomonas aeruginosa ATCC® 27853				
	Bacillus subtilis ATCC® 6633	64-72 h at 20-25 °C	Previously validated batch of Yeast extract agar acc. ISO 6222 (YEA)		
	Escherichia coli ATCC® 8739				
	Escherichia coli ATCC® 25922				
	Pseudomonas aeruginosa ATCC® 27853				

Please refer to the actual batch related Certificate of Analysis.

The performance test is in accordance with the current version of EN ISO 11133. A recovery rate of 70 % is equivalent to a productivity value of 0.7.



Penicillium commune ATCC® 10428

Rhodotorula mucilaginosa DSM 70403

Escherichia coli ATCC® 25922

Literature

Corry, J.E.L., Curtis, G.D.W. and Baird, R.M. (2012): Handbook of Culture Media for Food and Water Microbiology, p. 975-976. Royal Society of Chemistry, Cambridge, UK.

ISO International Standardisation Organisation. Water quality - Enumeration of culturable micro-organisms - Colony count by inoculation in a nutrient agar culture medium. EN ISO 6222:1999.

ISO International Standardisation Organisation. Microbiology of food, animal feed and water - Preparation, production, storage and performance testing of culture media. EN ISO 11133:2014.

Ordering Information

Product	Cat. No.	Pack size	Other pack sizes
GranuCult™ Yeast Extract Agar acc. ISO 6222	1.13116.0500	500 g	available
ReadyTube™ 18 Yeast Extract ISO 6222	1.46121.0020	20 x 18 ml	100 x 18 ml 10 x 100 ml 6 x 400 ml

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Find contact information for your country at:
www.EMDmillipore.com/offices

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