Expiration date for VWR microbiology culture media after preparation starting from dehydrated media

The expiration after preparation depends on several factors always focused to prevent dehydration of the medium. Dehydration of the medium can cause lower productivity for general media, higher selectivity or delay in specificity.

The expiration time for the media prepared starting from dehydrated media can be calculated only if both a standardized manufacturing process and the final media packaging are known and defined.

It is necessary to consider that the shelf life after preparation depends on the following issues:

- **Surface dehydration:**
  (which format is used after preparation: 90 mm plates, 50 mm plates, tube, bottles, etc.). The smaller is the surface on the top of the medium, the greater is the expiration time.
- **Sealing of conditioning:**
  the kind of packaging is critical to reduce the loss of water.
- **Product Storage:**
  also the storage temperature has an effect on the dehydration.

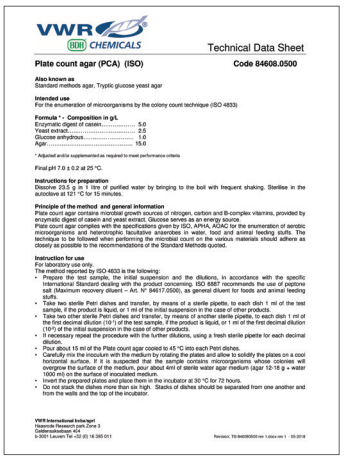
The user in charge of the preparation of a dehydrated medium must validate real days of expiration date, taking in considerations this premises.

FIGURE 1: Plate Count Agar granulated for microbiology.

In our VWR technical data sheets is occasionally indicated the expiration media once prepared but the recommendation indicated above has to be always taken in account.

A general help arrives from the standard ISO 11133:2014 where the paragraph 4.4.2. deals with the topic "Storage and shelf-life of prepared media".

As a general guideline for the users of our VWR culture media, considering all we have indicated here above we can say that, if a culture medium is prepared by the user starting from the dehydrated medium, our general recommendation is to store it in the refrigerator and not to exceed four weeks of storage for plates and six months for sealed bottles and tubes.



VWR CHEMICALS

Technical Data Sheet

Plate count agar (PCA) (ISO) **Code 84608.0500**

Also known as
Standard methods agar, Tryptic glucose yeast agar

Intended use
For the enumeration of microorganisms by the colony count technique (ISO 4833)

Formula * - Composition in g/L
Enzymatic digest of casein..... 5.0
Yeast extract..... 2.5
Glucose anhydrous..... 1.0
Agar..... 15.0

* Adjusted and/or supplemented as required to meet performance criteria

Final pH 7.0 ± 0.2 at 25 °C.

Instructions for preparation
Dissolve 23.5 g in 1 litre of purified water by bringing to the boil with frequent shaking. Sterilise in the autoclave at 121 °C for 15 minutes.

Principle of the method and general information
Plate count agar contains microbial growth sources of nitrogen, carbon and B-complex vitamins, provided by enzymatic digest of casein and yeast extract. Glucose serves as an energy source.
Plate count agar complies with the specifications given by ISO, APHA, AOAC for the enumeration of aerobic microorganisms and heterotrophic facultative anaerobes in water, food and animal feeding stuffs. The technique to be followed when performing the microbial count on the various materials should adhere as closely as possible to the recommendations of the Standard Methods quoted.

Instruction for use
For laboratory use only
The procedure used by ISO 4833 is the following:
- Prepare the test sample, the initial suspension and the dilutions, in accordance with the specific International Standard dealing with the product concerning. ISO 6887 recommends the use of peptone salt (Maximum recovery diluent – Art. N° 84617.0500), as general diluent for foods and animal feeding stuffs.
- Take two sterile Petri dishes and transfer, by means of a sterile pipette, to each dish 1 ml of the test sample, if the product is liquid, or 1 ml of the initial suspension in the case of other products.
- Take two other sterile Petri dishes and transfer, by means of another sterile pipette, to each dish 1 ml of the first decimal dilution (10-1) of the test sample, if the product is liquid, or 1 ml of the first decimal dilution (10-1) of the initial suspension in the case of other products.
- If necessary repeat the procedure with the further dilutions, using a fresh sterile pipette for each decimal dilution.
- Pour about 15 ml of the Plate count agar cooled to 45 °C into each Petri dishes.
- Mix carefully the inoculum with the medium by rotating the plates and allow to solidify the plates on a cool horizontal surface. If it is suspected that the sample contains microorganisms whose colonies will overgrow the surface of the medium, pour about 4ml of sterile water agar medium (agar 12-16 g + water 1000 ml) on the surface of inoculated medium.
- Invert the prepared plates and place them in the incubator at 30 °C for 72 hours.
- Do not stack the dishes more than six high. Stacks of dishes should be separated from one another and from the walls and the top of the incubator.

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FIGURE 2: The technical data sheets of VWR dehydrate culture media provide the information concerning the correct use of the media. Available on our website vwr.com