Quality at its best.
Dehydrated culture media.
Quality control according to ISO 11133

Merck Millipore places high value on health and safety aspects with respect to dehydrated culture media. Our media are therefore manufactured in compliance with the European Directorate for the Quality of Medicines. Produced in granulated form, they offer several health and safety advantages when compared to equivalent powder culture media. For example, they produce considerably less dust. The products’ excellent free-flowing properties, wettability and solubility make them much easier to use than traditional media. In our certificates, we specify the highest performance criteria available on the market. Moreover, Merck Millipore was one of the first companies to start implementing ISO 11133 guidelines in quality control and production.
Certificates of Analysis
“The manufacturer of culture media shall provide, on request, the specific microbiological growth characteristics and general information relating to the specific batch of culture medium” [1] Informative CoAs for each batch are part of Merck Millipore’s superior documentation and help to maintain comprehensive documentation for labs in order to ensure safe customer audits.

Media requirements
Quality criteria are applicable to all kinds of media, whether solid, semi-solid or in liquid form. Non-selective media, such as Plate Count Agar, should have a productivity of 0.7.

Selective liquid enrichment media:
Liquid media should be tested using mixed cultures. In mixed cultures, target organisms should not be inhibited by non-target organisms. Examples are described in the amendment of ISO 11133.

Control strain requirements
Test organisms used for growth performance can influence results. On one hand, well-growing strains may deliver unrealistically good results. On the other, focusing only on weakly growing organisms can make quality control unnecessarily difficult.

ISO 11133 recommended test strains offer a compromise. As a commercial producer of culture media, Merck Millipore uses the complete amount of the test strain for growth performance tests. The strain numbers, which are specified in ISO 11133, are the same as those identified in the catalog of universal strains, and contain details about the reference strains which are represented by each WDCM[2] number.


Granulated culture media by Merck Millipore

"Respect good laboratory practice and the manufacturer's instructions regarding the handling of dehydrated media and other components, particularly those containing hazardous materials i.e. bile salts or other selective agents. Carefully weigh the appropriate amount of dehydrated medium (taking care not to inhale powder, especially with media containing toxic substances) and progressively add the required amount of water avoiding clumping."

Our wide product range of granulated culture media makes it easy to follow the guidelines of ISO 11133. Considerably less dust is produced when handling granulated media, reducing the dangers associated with fine dust and toxic substance inhalation significantly. As a result, the environment and working tools are less contaminated and fellow staff are protected against accidental pollution.

Our granulated media are highly accurate, as even under humid or warm conditions, the components are not separated and lump formation does not occur. Additionally, handling and weighing is easier due to the product's excellent free-flowing properties.

"Dehydrated media needs rapid dispersion by instant and repeated stirring followed by heating, if necessary, to dissolve. Media containing agar should be allowed to soak for several minutes prior to heating with mixing to dissolve."

Merck Millipore's granulated media dissolve rapidly and uniformly in water, without the formation of lumps during this process. Moreover, the powder does not stick to the flask or container.

The homogenous distribution of ingredients before granulation guarantees high reproducibility, even if only small amounts of media are used.

For more information about our dehydrated culture media product range please visit our website:
www.merckmillipore.com/dehydratedmedia


[4] Ibid.
In laboratories performing microbiological examinations of foods and feedstuffs or environmental and water analyses, tests and procedures often depend on culture media being consistent and providing reproducible results.

The main objectives are to maintain, resuscitate, grow, detect and/or enumerate a wide variety of microorganisms. Media requirements are specific to both the sample and the organisms to be detected. Culture media must meet established or minimal performance criteria, which are mandatory for any reliable microbiological work. Adequate testing should be conducted to demonstrate this.

ISO 11133 is a guideline for the preparation and quality control of media, which describes the criteria culture media must fulfil, such as limits for productivity and selectivity.

It applies to:
- Commercially manufactured ready-to-use media
- Commercially available dehydrated formulations
- Laboratories preparing culture media for their own use

Merck Millipore’s Certificates of Analysis (CoA) are a benchmark. The introduction of recovery rates clearly demonstrates how strictly Merck Millipore follows the recommendations of ISO 11133 to make the results of growth performance tests quantitative.

- Hard facts like recovery rates make it easier to compare products from different manufacturers.
- The use of recommended test strains enables the comparison of manufactures’ growth performance results with test results obtained in customers’ labs.
We provide information and advice to our customers on application technologies and regulatory matters to the best of our knowledge and ability, but without obligation or liability. Existing laws and regulations are to be observed in all cases by our customers. This also applies in respect to any rights of third parties. Our information and advice do not relieve our customers of their own responsibility for checking the suitability of our products for the envisaged purpose.