



**Leibniz Institute**  
DSMZ-German Collection  
of Microorganisms  
and Cell Cultures GmbH

## » Must go to laboratory.

Important information for  
the recipient of microorganisms!



### ***Nagoya Protocol***

*The Nagoya Protocol deals with the accession and distribution of genetic resources (i.e., biological material) in the frame of the Convention on Biological Diversity - CBD ([www.cbd.int](http://www.cbd.int)). The recipients of DSMZ cultures have to ensure that the use of organisms received complies with the requirements of the CBD and the Nagoya Protocol ([www.cbd.int](http://www.cbd.int)). In order to ensure traceability of biological material, passing on of cultures or derivatives or DNA to third parties is not permitted, see also section 10 of the DSMZ Terms ([www.dsmz.de/terms](http://www.dsmz.de/terms)).*

*More information about the Nagoya Protocol: [www.dsmz.de/about-us/nagoya-protocol.html](http://www.dsmz.de/about-us/nagoya-protocol.html)*

## Handling and safety information

**All consignments containing microorganisms must be unpacked in an appropriately equipped laboratory.**

**Microorganisms, including genetically engineered strains, may be pathogenic to humans, animals or plants. Therefore, cultures must be handled by, or under the supervision of persons trained and competent in microbiological techniques. Before handling the organism, the user has to inform himself of national regulations governing work with microorganisms. Cultivation and handling is restricted to laboratories meeting the containment requirements laid down by the national authorities.**

**DSMZ delivers only biological material which can be handled up to containment level 2. Please see detailed information below:**

### 1. Identification of the biological agent

- Microbial culture, inoculum for preparing cultures, for laboratory use only!
- Species name and strain number as given on delivery note.
- Form of supplied material: freeze-dried or actively growing culture.

### 2. Hazards identification: risk assessment and laboratory containment level

- Each microorganism delivered with this consignment is classified according to German legislation (Biostoff-Verordnung). If a strain is allocated to Risk Group 2 (equivalent terms are Hazard Group or Biological Safety Level), this information is given in the DSMZ online catalogue ([www.dsmz.de/collection/catalogue/microorganisms/catalogue/](http://www.dsmz.de/collection/catalogue/microorganisms/catalogue/)) under the respective strain information and on the delivery note.

- Required laboratory containment level corresponds to the Risk Group of the microorganism. Observe national regulations.
- Apart from infectivity/pathogenicity, genetically modified microorganisms are to be handled according to relevant national legislation and under contained use only.
- Toxin production: if known see 7.
- Avoid all direct physical contact with the organism. Control dust (aerosols), skin and eye contact.

### 3. First aid measures

In case of contact, wash contaminated skin thoroughly with disinfectant and water. If wound contamination is suspected, seek immediate medical attention. In case of ingestion/inhalation, seek immediate medical attention. Inform medical practitioner of name of the microorganism.

### 4. Accidental release measures and spillage/environmental precautions

- Decontaminate/sterilize/autoclave all material that may have come into contact with the culture.
- Keep culture material away from drains, surface- and ground water and soil.
- If culture vial is accidentally broken, soak contaminated area with appropriate disinfectant.
- Broken glass has to be picked up with forceps.

### 5. Handling and storage

- Ampoules/cultures must be opened and used by trained persons in a laboratory of appropriate safety level.
- Hints how to open ampoules with dried cultures are provided with this handout and on our online catalogue on

([www.dsmz.de/support/video-tutorials.html#c2960](http://www.dsmz.de/support/video-tutorials.html#c2960)). Hints how to handle actively growing cultures are given with the strain specific data in our online catalogue ([www.dsmz.de/collection/catalogue/microorganisms/catalogue](http://www.dsmz.de/collection/catalogue/microorganisms/catalogue)).

- All cultures delivered by DSMZ are for immediate use (see our conditions of delivery, § 8.1). Before use, store cultures in a cool, dark place.
- Please observe our Terms and Conditions ([www.dsmz.de/terms](http://www.dsmz.de/terms)), in particular the restrictions concerning the distribution to third parties (§ 10 of the Terms).

## 6. Exposure controls/personal protection

Depends upon the Risk Group of delivered culture and is described in the respective containment level instructions (in Germany, see the Biostoff-Verordnung). Precautionary measures such as lab coat and, if required, protective gloves and glasses minimise worker's exposure.

## 7. Toxicological information

See strain information as given in the DSMZ catalogue of strains ([www.dsmz.de/collection/catalogue/microorganisms/catalogue](http://www.dsmz.de/collection/catalogue/microorganisms/catalogue)). For possible restrictions on handling and distribution of certain toxin producers see >Permissions/Restrictions. Information given by DSMZ on possible or known toxin production of any strain is not exhaustive! DSMZ does not perform toxicity tests with cultures.

## 8. Disposal

Sterilize all cultures before disposal.

## Supplier:

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The information contained herein is offered for informational purposes only and is based on the present State of our knowledge. Recipients of our microorganisms must take responsibility for observing existing laws and regulations. DSMZ accepts no responsibility for the accuracy, sufficiency, reliability or for any loss or injury resulting from the use of this information.

## Hints how to cultivate our microbial cultures

General recommendations are given on [www.dsmz.de/collection/catalogue/microorganisms/culture-technology](http://www.dsmz.de/collection/catalogue/microorganisms/culture-technology), including culturing under aerobic or anaerobic conditions, cultivation hints for organisms with particular requirements and a list of all media compositions.

Specific cultivation conditions (medium, gas atmosphere, temperature) for each strain, whether delivered actively growing or freeze-dried, are given in the single strain entries on [www.dsmz.de/collection/catalogue/microorganisms/catalogue](http://www.dsmz.de/collection/catalogue/microorganisms/catalogue) (search for the DSM number). More information at [www.dsmz.de/faq-microbes](http://www.dsmz.de/faq-microbes).

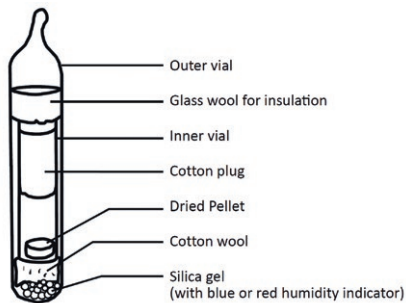
## Cultures which were delivered actively growing on agar media or in liquid media

Transfer to fresh media given for that specific strain immediately after receipt. Incubate under the recommended conditions. The volume of fresh liquid media should not be higher than 10 times the volume of the inoculum.

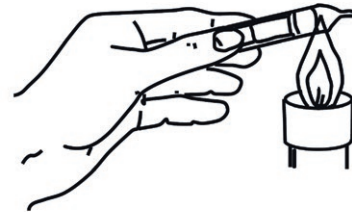
## Opening of ampoules and rehydration of dried cultures

Videos may be regarded at [www.dsmz.de/collection/catalogue/microorganisms/culture-technology](http://www.dsmz.de/collection/catalogue/microorganisms/culture-technology).

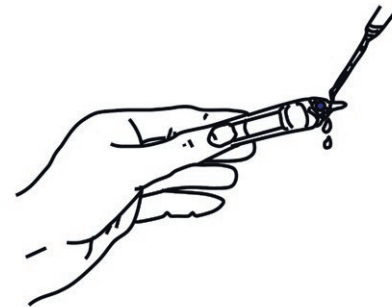
1. Remove the glass ampoule carefully from the secondary packaging. Double vial preparation, sealed under vacuum:



2. Wear protective glasses when opening ampoules! Heat the tip of the ampoule in a flame.



3. Place maximal three drops of water onto the hot tip to crack the glass.

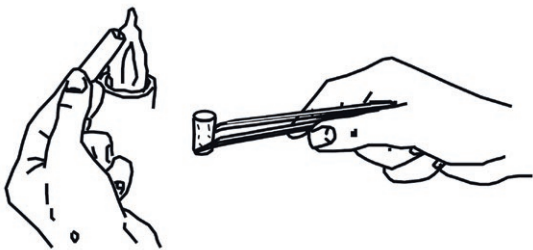


4. Carefully strike off the glass tip with an appropriate tool (e.g. forceps).



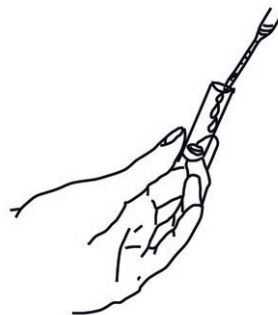
5. Remove the insulation material with forceps and take out the inner vial.

6. Lift the cotton plug using a forceps, remove it, keep it under sterile conditions and flame the top of the inner vial.



7. Add 0.5 ml of medium specified for the strain in the individual strain entry (see above). Replace the plug and allow the pellet to rehydrate for up to 30 minutes.

Subsequent handling of **anaerobic** strains is described on our website as well as in the specific strain entries in the online catalogue. For all other strains proceed as follows.



8. Mix the content gently with an inoculation loop or with a Pasteur pipette. Transfer about half of the whole amount to a test tube with 5 ml of the recommended liquid medium, streak the other half onto a respective agar plate.  
(For variations see catalogue strain information.)
9. Incubate liquid and agar cultures under conditions specified for the strain.
10. Before discarding sterilize all the remains of the original ampoule.

## Information resources

### International:

- World Health Organization (2020) Laboratory Biosafety Manual, 4th ed. WHO, Geneva, ISBN 9789240011311
- World Health Organization (2006) WHO Laboratory Biosecurity Guidance, WHO/CDS/EPR/2006.6
- The Australia Group Biological Agents lists
- The Convention on Biological Diversity CBD including the Cartagena Protocol on Biosafety and the Nagoya Protocol on Access and Benefit-Sharing

### Europe:

- Directive 2000/54/EC of 18 September 2000 of the European Parliament and of the Council on the protection of workers from risks related to exposure to biological agents at work
- Regulation (EU) 2021/821 of 20 May 2021 of the European Parliament and of the Council setting up a Union regime for the control of exports, brokering, technical assistance, transit and transfer of dual-use items (recast)
- European Parliament of the Council Regulation (EU) 2016/2031 of 26 October 2016, on protective measures against pests of plants, amending Regulations (EU) No 228/2013, (EU) No 652/2014 and (EU) No 1143/2014 of the European Parliament and of the Council and repealing Council Directives 69/464/EEC, 74/647/EEC, 93/85/EEC, 98/57/EC, 2000/29/EC, 2006/91/EC and 2007/33/EC
- Commission implementation regulation (EU) 2019/2072 of 28 November 2019 and the amending Implementing Regulation (EU) 2021/2285 of 14 December 2021, establishing uniform conditions for the implementation of Regulation (EU) 2016/2031 of the European Parliament and the Council, as regards

protective measures against pests of plants, and repealing Commission Regulation (EC) No 690/2008 and amending Commission Implementing Regulation (EU) 2018/2019

- Directive 2009/41/EC of 6 May 2009 of the European Parliament and Council on the contained use of genetically modified microorganisms

### Germany:

- Gesetz zur Verhütung und Bekämpfung von Infektionskrankheiten beim Menschen (Infektionsschutzgesetz, IfSG)
- Verordnung über Sicherheit und Gesundheitsschutz bei Tätigkeiten mit biologischen Arbeitsstoffen (Biostoff-Verordnung, BioStoffV)
- Technische Regeln für Biologische Arbeitsstoffe (TRBA): Bundesanstalt für Arbeitsschutz und Arbeitsmedizin, [www.baua.de](http://www.baua.de) > Suche nach „TRBA“, insbesondere TRBA 100, TRBA 400, TRBA/ TRGS 406, TRBA 450, TRBA 460, TRBA 466, und TRBA 500
- Verordnung über das Arbeiten mit Tierseuchenerregern (TierSeuchErV)
- Verordnung über das innergemeinschaftliche Verbringen und die Einfuhr von Tierseuchenerregern (TierSeuchErEinfV)
- Gesetz über die Kontrolle von Kriegswaffen, Ausführungsgesetz zu Artikel 26 Abs. 2 des Grundgesetzes (KrWaffKontrG) mit Verordnungen
- Gesetz zur Regelung der Gentechnik (GenTG) mit Verordnungen

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