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Dokument:	Medienhinweis			
Titel:	Phagenhinweise allgemein englisch			

SUPPLY, STORAGE AND PROPAGATION OF PHAGES

SUPPLY AND STORAGE

DSMZ phages are usually delivered as cell-free lysates in complex medium. The bacterial host cells and debris have been eliminated by centrifugation and filtration. New lots of phage stocks are tested for phage titre and plaque morphology/plaque purity. Phage suspensions as delivered to our customers are usually high titre solutions in the range from 1×10^8 - 1×10^{11} pfu/mL (pfu = **p**laque **f**orming **u**nits/mL). All phages should be stored cool immediately upon receipt. Don't freeze phage suspensions. When stored cool, most of the phages will remain active without significant loss of activity for several months. However, DSMZ does not guarantee for phage survival over longer storage periods. Phage lysates can be stored in liquid nitrogen for long-term purposes if a cryoprotectant has been added. Due to better survival during transport over long distances, DSMZ usually delivers filter-dried phage suspensions to destinations outside Germany, please observe our separate hints (see also our homepage). According to our **Terms and Conditions**, all kinds of biological material supplied by DSMZ is foreseen for immediate use in the authorised laboratory only.

PHAGE PROPAGATION

Please, use the host strain recommended for a particular phage (see our homepage). DSMZ will not guarantee for successful phage propagation when other strains are used as hosts. Phage stocks can be prepared directly from phage suspensions, or by floating plaque-containing agar plates with phage buffer. Performing lysis is possible by using liquid cultures or on plates. In case of plates, they can be shaken carefully on a plate shaker for several hours in order to get a high titre, or the soft agar layer can be scraped off under sterile conditions. In case of liquid lysis, the culture should be observed because of the development of possibly phage-resistant bacterial cells overgrowing the culture. Agar and bacterial debris should be sedimented by centrifugation. A filtration through 0.45 µm membrane filters is recommended. Upon severe loss of titre, even from a single plaque a phage suspension can be prepared by using a sterile pasteur pipette for recovery of the plaque and subsequent suspension in a few drops of phage buffer. High titre phage stocks can be prepared with the agar layer method: 5 mL medium are added to a plate with confluent lysis. Use the dilution plates for examining plaque morphology.

Useful further information on phages: <http://www.cabri.org/guidelines/phages/phcover.html>

A widely used Medium and buffer for phage propagation:

General Growth Medium

Difco Nutrient Broth	8 g
NaCl	0.8 g
Difco Bacto Agar	15 g
Distilled Water to	1.0 L

Phage Buffer

Na ₂ HPO ₄ anhydrous	7 g
KH ₂ PO ₄ anhydrous	3 g
NaCl	5 g
0.1 M MgSO ₄	10 mL
0.1 M CaCl ₂	10 mL
H ₂ O to	1.0 L

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DSMZ, April 2008