

Arabinose Solution (20%, Sterile-Filtered)

Cat. No.: A1524583 | Pack size: 100ml | Storage: Room temperature

Overview

Arabinose can serve as a carbon source for microorganisms. L-(+)-Arabinose acts as an inducer for the araBAD promoter, which is widely applied in prokaryotic expression systems such as the BL21(AI) strain and the pBAD series protein expression vectors. This product is sterilized via 0.22 μ m membrane filtration and can be directly added to culture medium.

Operating Instructions

1. For BL21(AI) strain: When inducing protein expression together with IPTG, add filter-sterilized L-(+)-arabinose to a final concentration of 0.2%. The concentration of L-(+)-arabinose determines the intracellular abundance of T7 RNA polymerase; higher arabinose concentration leads to increased production of T7 RNA polymerase inside cells. The adjustable working concentration range of L-(+)-arabinose for BL21(AI) is generally 0.05%–0.5%.
2. For pBAD expression vectors or other arabinose-inducible protein expression plasmids: Add filter-sterilized L-(+)-arabinose for induction. Optional adjustable final concentrations include 0.00002%, 0.0002%, 0.002%, 0.02% and 0.2%.

Precautions

1. Unopened arabinose solution can be stored at room temperature for 1 year. For long-term preservation, storage at -20 °C is recommended. Discard the solution immediately if contamination is observed after opening.
2. Arabinose solutions cannot be sterilized by autoclaving at high temperature.

Specifications

Item	Specification
Specifications & Purity	Sterile-filtered, BioReagent, for Microscopy, 20% (w/v) in water
Stability And Storage	Store at room temperature long term (12 months).
Storage	Room temperature
Shipped In	Normal
Application	Microbial culture

Names and Identifiers

Identifier	Value
CAS	5328-37-0
EC Number	226-214-6
Specific Rotation[α]	+102 to +106 deg(C=10, H ₂ O)
Melt Point(°C)	157-160°C
Isomeric SMILES	<chem>C([C@@H]([C@@H]([C@H](C=O)O)O)O)O</chem>
WGK Germany	3
Alternate CAS	87-72-9
Molecular Weight	150.13
Beilstein	1723085
Reaxys-Rn	2325068
Reaxys-RN_link_address	https://www.reaxys.com/reaxys/secured/hopinto.do?context=S&query=IDE.XRN=2325068&ln=

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- ☐ This product is not a CE-marked in vitro diagnostic device under IVDR (EU) 2017/746 and is not an FDA-cleared device under 21 CFR. Use is restricted to verified businesses, institutions, and qualified professionals for research and development purposes.
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