

Liquillizer® Instructions for Use

REF P-7510-001-IG and P-7510-002-IG

Intended Use

MetaSystems Liquillizer® is a ready-to-use mucolytic agent. The buffer contains a mucolytic agent for liquefying respiratory samples.

Summary

Liquillizer is intended for the liquefaction of viscous respiratory specimens such as sputa, tracheal secretions, bronchial secretions or bronchoalveolar lavage. The mucolytic Dithiothreitol (DTT)-free buffer reduces specimen viscosity for easier sample handling. The buffer is stable for 4 weeks after opening.

Precautions

- For *in-vitro* diagnostic use.
- Rx only.
- For professional use only by personnel trained in laboratory techniques.
- Observe approved biohazard precautions and aseptic techniques. To be used by adequately trained and qualified personnel only.
- Instructions should be read and followed carefully.
- All specimens and materials used for processing should be considered as potentially infectious and handled with care to prevent infection of laboratory personnel. Consider all waste including specimen, containers and media as biohazard and dispose of accordingly.

Storage

This product is ready to use. The sealed bottle can be stored at room temperature until expiration date. Improper storage will result in loss of efficacy. Do not use after expiration date, which appears on package and bottle.

Table 1: Storage conditions of the buffer

Name	Volume	Store at	Expiration date
Liquillizer	125 ml	15 - 25 °C	unopened see label after opening: use within 4 weeks
Liquillizer	250 ml	15 - 25 °C	unopened see label after opening: use within 4 weeks

Product Deterioration

Do not use Liquillizer if: (1) the product shows visible marks of damage or contamination; (2) there is evidence of leakage; (3) the expiration date has passed; (4) there are signs of deterioration.

Material Supplied

REF No.	Volume	Product description
P-7510-001-IG	125 ml	Aqueous solution containing reagents
P-7510-002-IG	250 ml	Aqueous solution containing reagents

Material Required but not Supplied

Consult laboratory reference manuals for recommended materials and protocols for culture and identification techniques.

Operating Instructions

- For optimal liquefaction transfer an aliquot of the clinical sample into an empty tube and mix sample with an equal volume of Liquillizer or add an equal volume of Liquillizer directly to the sample.
- Vortex and/or shake vigorously until the sample is sufficiently liquefied.

Limitations

- Wear gloves and other protective gear following universal precautions when handling clinical specimens.
- Condition, timing and volume of specimen collected for culture are significant variables in obtaining reliable culture results. Proper specimen collection from the patient is extremely critical for successful isolation and identification of infectious organisms. For specific guidance regarding specimen collection procedures, consult published reference manuals.
- Viability testing with MetaSystems' Liquillizer for cultures was conducted using laboratory strains spiked into sterile water.

Safety Notes

- Not suitable for any other application than intended use.
- The use of this product in association with any diagnostic assay or with any diagnostic instrumentation should be validated before use.
- Do not use if the product is visibly damaged.

- Do not swallow.
- Instructions for use must be followed carefully. The manufacturer cannot be held responsible for any unauthorized and unqualified use of the product.
- To be used by adequately trained and qualified personnel only.
- It must be assumed that all specimens contain infectious microorganisms; therefore, all specimens must be handled with appropriate precautions.
- For single use only, reuse of the buffer applied to the sample may cause a risk of infection and inaccurate results.

Waste Disposal

Unused Liquillizer may be considered as non-hazardous waste and disposed of accordingly. Dispose of used reagents as well as any other contaminated materials following procedures for potentially infectious products. It is the responsibility of each laboratory to handle waste and effluents according to their nature and degree of hazardousness and to treat and dispose them (or have them treated and disposed) in accordance with any applicable regulations.

Viability Study

A study on survival of respiratory pathogens in contrived specimens that have been stored for 6 hours at room temperature following homogenization with MetaSystems' Liquillizer showed that organisms remained viable and culturable as shown below.









Test Results

Strains	Cell count CFUs 0h		Cell count CFUs 6h	
	ddH ₂ O	Liquillizer	ddH ₂ O	Liquillizer
<i>Candida albicans</i> (ATCC 90029)	1	2	3	2
<i>Moraxella catarrhalis</i> (ATCC 25238)	105	108	66	60
<i>Pseudomonas aeruginosa</i> (ATCC 10145)	110	106	72	76
<i>Staphylococcus aureus</i> (ATCC 9144)	57	62	49	33
<i>Streptococcus pneumoniae</i> (ATCC 6303)	12	16	2	5
<i>Streptococcus pyogenes</i> (ATCC 12344)	95	92	71	60

Procedure of Testing

- Fresh cultures of the test organism were prepared as a 0.5 McFarland in sterile water
- Dilutions were prepared in sterile water starting with the 0.5 McFarland inoculum to obtain a final dilution of 10⁴ CFU/ml
- 50 µl of the final dilution was mixed with 50 µl of sterile water
- 100 µl of mixture was streaked on appropriate culture plates
- 50 µl of the final dilution was mixed with 50 µl of MetaSystems' Liquillizer
- 100 µl of mixture was spread on appropriate culture plates
- Plates were incubated at 37 °C for 24 hours to obtain 0h count plates
- 50 µl of the final dilution was mixed with 50 µl of sterile water and kept for 6 hours at room temperature (15 - 25 °C)
- After 6 hours, 100 µl of mixture was spread on appropriate culture plates
- 50 µl of the final dilution was mixed with 50 µl of MetaSystems' Liquillizer and kept for 6 hours at room temperature (15 - 25 °C)
- After 6 hours, 100 µl of mixture was spread on appropriate culture plates
- Plates were incubated at 37 °C for 24 hours to obtain 6h time count plates

Symbols Glossary

	Product code / Catalog number
	Lot number
	Use by date
	Temperature limitation for storage
	Manufacturer
	Consult instructions for use
	Protect from direct sun light
	<i>In-vitro</i> diagnostic medical device
Rx only	Caution: Federal law restricts this device to sale by or on the order of a physician
Hazard symbols	See material safety data sheet (MSDS)



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