

Lonza Walkersville, Inc.
8830 Biggs Ford Road
Walkersville, MD 21793-0127, USA

December 27, 2011

ATTN: Valerie Stone
Company: Clariant

Re: Material Safety Data Sheet Request

DEAR CUSTOMER:

This is to acknowledge your request for Material Safety Data Sheet on the following Lonza product:

| <u>Part#</u> | <u>Description</u> |
|--------------|--|
| 09-774E | RPMI1640,HEPES, Pen, Strep&Glut, 100ml |

There are no hazardous or toxic substances found in this product that would require us to distribute a Material Safety Data Sheet according to the Federal OSHA requirements.

If we may be of further assistance, please do not hesitate to contact us.

Sincerely,



Customer Service Supervisor

RPMI 1640 Medium

Product Use

RPMI 1640 was developed for culturing normal human leukocytes. It can be used for suspension and monolayer mammalian cultures.

RPMI 1640 – Liquid

| | |
|--------|---|
| 08-012 | without L-glutamine, media bag |
| 09-774 | with L-glutamine, 25 mM HEPES, 100 units/ml Penicillin and µg/ml Streptomycin |
| 12-115 | With 25 mM HEPES, with L-glutamine |
| 12-167 | without L-glutamine |
| 12-702 | with L-glutamine |
| 12-918 | without L-glutamine, without phenol red |

RPMI 1640 – Powder*

| | |
|--------|------------------|
| 15-702 | with L-glutamine |
|--------|------------------|

*RPMI 1640 powder media does not contain sodium bicarbonate in the powder mixture. The recommended sodium bicarbonate (NaHCO₃) concentration for RPMI is 26.7 ml/L of 7.5% NaHCO₃ solution or 2.0 g/L of NaHCO₃ powder. The recommended L-glutamine concentration in RPMI 1640 is 2.1 mM (300 mg/L of L-glutamine powder or 10.3 ml of 200 mM L-glutamine solution).

Quick Reference Chart

| | L-glutamine | HEPES | Pen/Strep | Phenol Red | Container |
|--------|-------------|-------|-----------|------------|----------------|
| 08-012 | - | - | - | + | Media Bag |
| 09-774 | + | + | + | + | Bottles |
| 12-115 | + | + | - | + | Bottles |
| 12-167 | - | - | - | + | Bottles |
| 12-702 | + | - | - | + | Bottles |
| 12-918 | - | - | - | - | 500 ml Bottles |
| 15-702 | + | - | - | + | |

Storage/Shelf Life

| | Storage Temperature |
|--------|---------------------|
| 04-557 | 2°C to 8°C |
| 04-558 | 15°C to 30°C |
| 08-012 | 2°C to 8°C |
| 09-774 | 2°C to 8°C |
| 12-115 | 2°C to 8°C |
| 12-167 | 15°C to 30°C |
| 12-702 | 2°C to 8°C |
| 12-918 | 15°C to 30°C |
| 15-702 | 2°C to 8°C |

Specifications

| | Sterility | pH | Osmolality (mOsm) | Cell Growth Promotion (% of control) | Endotoxin (EU/ml) |
|--------|-----------|-----------|-------------------|--------------------------------------|-------------------|
| 04-557 | Neg. | 7.0-7.4 | 271-295 | -- | FIO |
| 04-558 | Neg. | 7.0-7.5 | FIO | -- | FIO |
| 08-012 | Neg. | FIO | FIO | -- | FIO |
| 09-774 | Neg. | FIO | FIO | -- | -- |
| 12-115 | Neg. | 7.12-7.48 | 271-315 | ≥75% | FIO |
| 12-167 | Neg. | 6.9-7.4 | 270-293 | ≥75% | FIO |
| 12-702 | Neg. | 6.9-7.3 | 271-295 | ≥75% | FIO |
| 12-918 | Neg. | 7.0-7.4 | 270-293 | ≥75% | FIO |
| 15-702 | -- | 7.1-7.9* | 215-245 | ≥75% | ≤ 1.0 |

* w/o NaHCO₃

** FIO – For Information Only

Product Use Statement

THESE PRODUCTS ARE FOR RESEARCH USE ONLY. Not approved for human or veterinary use, for application to humans or animals, or for use in clinical or *in vitro* procedures.

Ordering Information

| Catalog Number | Description | Size |
|----------------|--|----------|
| 08-012B | RPML without L-glutamine, media bag | 10 L |
| 08-012F | RPML without L-glutamine, media bag | 20 L |
| 09-774E | RPML with L-glutamine, 25 mM HEPES, 100 units/ml Penicillin and µg/ml Streptomycin | 100 ml |
| 09-774F | RPML with L-glutamine, 25 mM HEPES, 100 units/ml Penicillin and µg/ml Streptomycin | 500 ml |
| 12-115F | RPML with 25 mM HEPES, with L-glutamine | 500 ml |
| 12-115Q | RPML with 25 mM HEPES, with L-glutamine | 1 L |
| 12-167F | RPML without L-glutamine | 500 ml |
| 12-167Q | RPML without L-glutamine | 1 L |
| 12-702F | RPML with L-glutamine | 500 ml |
| 12-702Q | RPML with L-glutamine | 1 L |
| 12-918F | without L-glutamine, without phenol red | 500 ml |
| 15-702D | RPML with L-glutamine | 1 x 10 L |