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Glass Milk preparation - forked

Forked from Glass Milk preparation

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Other This protocol is published without a DOI.

MC2

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PROTOCOL CITATION

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MATERIALS

NAME	CATALOG #	VENDOR
Tris, 1 M, pH 8.0	AM9855G	Ambion
Hydrochloric acid	320331-500ML	Sigma – Aldrich
UltraPure™ 0.5 M EDTA pH 8.0	15575020	Thermo Fisher Scientific
Silica 325 Mesh		

STEPS MATERIALS

NAME	CATALOG #	VENDOR
Silica 325 Mesh		
Hydrochloric acid	320331-500ML	Sigma – Aldrich
MilliQ water		
Tris, 1 M, pH 8.0	AM9855G	Ambion
UltraPure™ 0.5 M EDTA pH 8.0	15575020	Thermo Fisher Scientific

MATERIALS TEXT

325 mesh silicon dioxide (Spectrum Chemicals - SI108) Silica 325 mesh is a flint glass powder available from ceramic shops https://www.spectrumchemical.com/OA_HTML/chemical-products_Silicon-Dioxide-325-Mesh-Crystalline_SI108.jsp?section=16930

Millipore Sigma 320331 HCl

EQUIPMENT

NAME	CATALOG #	VENDOR
Fume hood	Unknown	

SAFETY WARNINGS

dry silica powder should not be inhaled

DISCLAIMER:

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Glass Milk Preparation 7h

1 To prepare glass milk, 325 mesh silicon dioxide (Spectrum Chemicals - SI108) 45m

Silica 325 Mesh

was combined with an excess volume of 10% HCl (~3 N HCl)
made from combining 37%

Hydrochloric acid
by Sigma – Aldrich
Catalog #: 320331-500ML

and MilliQ water (Millipore) in a fume hood

MilliQ water

Fume hood
Fume hood
Generic **Unknown**

(dry silica powder should not be inhaled).

1.1 Sub step in forked version for testing. 30s

2 After acid washing for **04:00:00 Possibly 4 to 8 hours** at room temperature **Room temperature** , silica was pelleted by spinning two minutes at **5000 rpm, 00:02:00** 5,000 xg and the supernatant was poured off. 6h

3 The pellet was resuspended in four pellet volumes of 1h

MilliQ water

and then pelleted again.
This wash step was repeated for a total of six washes.

4 30m

The pellet was then washed with four pellet volumes of 10 mM Tris HCl, pH = 8 (ThermoFisher Scientific AM9855G)

Tris, 1 M, pH 8.0
by Ambion
Catalog #: AM9855G

and 1 mM EDTA (ThermoFisher Scientific 15575020),

UltraPure™ 0.5 M EDTA pH 8.0
by Thermo Fisher Scientific
Catalog #: 15575020

and pelleted.

5 Finally, the pellet was resuspended in 1 pellet volume of 10 mM Tris HCl and 1 mM EDTA and autoclaved. This autoclave step is likely superfluous, however, as acid washes should render the beads free of contaminants. The resulting 50% glass milk slurry can be stored at room temperature. 30m

Before use, care must be taken to vigorously resuspend the particles as they begin to settle quickly.