



Version 2

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Microfluidics Lithography 1 Mold Fabrication: Spin Coating of Photoresist (version s2) V.2

C. Yunus Sahan¹, Serhat S¹¹Nehir Biyoteknoloji Ltd. www.nehirbt.com.tr

1 Works for me

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NehirBT

Tech. support email: bilgi@nehirbt.com.tr

Serhat S

ABSTRACT

Nehir Biyoteknoloji Ltd. www.nehirbt.com

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KEYWORDS

Microfluidics, Spin coating, SU8, Si wafer

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MATERIALS TEXT

Acetone
Isopropanol
SU8 Photoresist

SAFETY WARNINGS

* All the related steps must be done in a clean room classD (min) and under yellow or red light.

* All spin coating procedures must be performed inside the fume hood.

BEFORE STARTING

This protocol is derived from

[Reference: Processing guidelines for permanent epoxy negative photoresist SU8 2025, SU8 2035, SU8 2050 and SU8 2075, MicroChem company]

SpinCoater Instrument Adjustment

10m

10m

- 1 Dispense 1ml of photoresist (SU8) resin for each inch (25mm) of Si wafer substrate diameter.

Spin at 500 rpm for 10 seconds with an acceleration of 100 rpm/second.

Spin at "N" rpm for 30 seconds with an acceleration of 300 rpm/second.

Expected results of photoresist thickness:

40um film thickness with N=4000 rpm spin of SU8 2050

25um film thickness with N=4000 rpm spin of SU8 2025

75um film thickness with N=2000 rpm spin of SU8 2050

40um film thickness with N=2000 rpm spin of SU8 2025



The step is performed inside the Class 100.000 cleanroom and in a fume hood.

Spin Coater Run

1m

1m

- 2 Place the wafer in the spin coater and run the device.

Microscope slides, Si/SiO₂ wafers, and glass/PMMA wafers are alternatives substrates.

Spin Coater

Laurell WS-650MZ-23NPPB

Soft Baking of SU8 Coated Wafer

15m

15m

- 3 Soft baking is done depending on the thickness of the coated photoresist film.

It is a few minutes of baking at 65°C and 5-15 minutes of baking at 95°C are applied.

Hot Plate

Electromag LB.EM.M4060

Stocking the Coated Wafer

- 4 In a petri plate, covered tightly with aluminum foil, photoresist-coated wafers can be stored in the cleanroom at room temperature for approximately one month.