

Buffers and Solutions for Microarraying

Microarray wash buffers **QIwash I, II & III (10X)**

Technical Instructions for post-hybridization washing of microarrays

I. INTRODUCTION

The QInstruments microarray wash buffers **QIwash I, II & III** (10x) have been designed for washing cDNA microarrays and long oligonucleotide microarrays, following the hybridization reaction.

II. GENERAL PRECAUTIONS

The protocols contained in this document are meant to be general guidelines only and some optimization may be required depending on the application and sample being used.

1. Refer to manufacturer supplied Material Safety and Data Sheets (MSDS) for proper handling and disposal of all slides and chemicals.
2. QInstruments buffer and solutions are for research use only, not for in vitro diagnostic use.

III. PRODUCT DESCRIPTION

For the washing of DNA-probes onto all surface coating Slides (e.g. Epoxy, Aldehyde, Amino) we recommend the optimized QInstruments wash buffers **QIwash I, II & III** (10x).

The washing of Microarray Slides can be done in Coplin jars or slide dishes and rack combos with vigorous agitation. Do not allow slides to dry between washes, and protect from light as much as possible. Never wash the slides with dH₂O after hybridization.

The solutions recommended below for washing are a general guideline; your application may require alternative stringency washes.

Prepare the solutions to get 500 ml of 1x wash buffer:	
Wash buffer	
QIwash I	Dilute 50 ml 10x QIwash I with 450 ml dH ₂ O (<i>mix under agitation</i>)
QIwash II	Dilute 50 ml 10x QIwash II with 450 ml dH ₂ O (<i>mix under agitation</i>)
QIwash III	Dilute 50 ml 10x QIwash III with 450 ml dH ₂ O (<i>mix under agitation</i>)

IV. PROTOCOL

Wash away unbound labeled probe. QInstruments microarray wash buffers **QIwash I, II & III** (10x) are recommended.

1. Place the microarray slides (max 10 pcs.) into a slide rack and immerse in a dish containing 500 ml **QIwash I**. Wash in the above solution 1 x 10 min at room temperature.
2. Wash 1 x 10 min in 500 ml **QIwash II** at room temperature.
3. Wash 1 x 10 min in 500 ml **QIwash III** at room temperature.

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or alternatively Step 1 to 3:

- a) Place the array into a slide rack and immerse in a dish containing 2x SSC and 0.2% SDS. Wash in the above solution 1 x 10 min at room temperature.
- b) Wash 1 x 10 min in 2x SSC.
- c) Wash 1 x 10 min in 0.2x SSC at room temperature.

Notes:

- The volume of the washing solution should be at least 250 ml for 5 Slides.

4. Dry the microarray slides in an oil free air or nitrogen stream or by centrifugation at 2 min at 150 to 200x g to avoid water stains on the slide surface.
5. Protect the array from light, dust and abrasion of the array surface, until ready for scanning.

The use of the hybridization buffer *QIhyb* is described in detail in our '*Complete Protocol for Epoxy Slides*', '*Complete Protocol for Aldehyde Slides*' and '*Complete Protocol for Amino Slides*'.

Notes:

- The results always depend on your equipment, your probes and your experimental conditions.
- The volume of the washing solution should be at least 250 ml for 5 Slides.
- Do not allow slides to dry between washes, and protect from light as much as possible.
- Never wash the slides with dH₂O after hybridization.
- Make all wash steps with vigorous agitation.
- The solutions recommended below for washing are a general guideline; your application may require alternative stringency washes.

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