

Introduction

Uranium is the heaviest metal used in staining and can be used as a general contrast agent. Uranyl Acetate binds to nucleic acids, to proteins and to membranous structures. This procedure contains guidelines for mild staining of cell culture. It can be used in cases in which only a mild contrast is required, for example, an immuno-gold labeled cell culture.



WARNING

Uranium compounds are toxic and radioactive. Contact your safety officer or local authorities for appropriate handling and disposal protocols.

➤ The reagents required

- Uranyl Acetate (5% stock in double distilled water, pH 3.5 with HCl, kept at 4°C in the dark)
- Double distilled water
- 0.45 µm filters

➤ Procedure



NOTES

- a. **Since Uranyl precipitates in the presence of Phosphate, samples must be rinsed thoroughly to remove traces of Phosphates before Uranyl staining.**
- b. **Perform all the following steps at room temperature.**

1. Before starting, prepare 0.1% Uranyl Acetate solution (diluted in double distilled water from stock and filtered through 0.45 µm syringe filters).
2. Wash 4 times with double distilled water
3. Incubate with 0.1% Uranyl Acetate for 5 minutes.
4. Wash 3 times with double distilled water



NOTE

Protocols provided by QuantomiX are based on work conducted at QuantomiX laboratories. They are given as a starting point which will facilitate the user's first steps in acquiring the desired imaging results. It is the user's responsibility to determine the suitability of any protocol published by Quantomix to their applications. Users may find it necessary to modify protocols in order to obtain the information required for their study.