



# Dublin Academic Medical Centre

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## Standard Operating Procedure Dublin Academic Medical Centre UCD Clinical Research Centre

SOP Number 5.4  
Version Number 1  
SOP Title Processing of Urine

	NAME	TITLE	DATE
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### Purpose

To outline the laboratory procedure for extracting DNA, RNA and total protein from urine.

### Specific procedure

1. All urine should be processed before storing. The cells shall be separated by centrifugation 1500g for 10min and collected in a centrifuge tube, then washed with PBS1x and centrifuged at 1500g for 5min. Resuspend the cells in 1ml freezing medium solution constituted of 10%DMSO in Fetal Calf Serum. Store the cells at -80oC.
2. If the urine is processed in the same day, it can be stored for a few hours with a 1:1 volume of 75% ethanol, and then cells can be collected by centrifugation and rocessed immediately.
3. Urine, without cells, can be collected after centrifugation and stored at -20oC. Before the processing step for the biochemical analysis they should be centrifuged again to remove the organic precipitated material.

### DNA extraction from cells

Centrifuge the cells stored in 1ml of freezing medium and 5ml of PBS1x. Discard the supernatant and continue with the procedure described or resuspend the cell pellet in 20ml extraction buffer and continue as per 5.1



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UCD Clinical Research Centre**

RNA extraction from cells

Centrifuge the cells stored in 1ml of freezing medium and 5ml of PBS1x.  
Discard the supernatant and continue with the procedure described in  
the SOP 5.2

Protein extraction from cells

Centrifuge the cells stored in 1ml of freezing medium and 5ml of PBS1x.  
Discard the supernatant and continue with the procedure described in  
the SOP 5.3

**Change History**

SOP no.	Effective Date	Significant Changes	Previous SOP no.