

**Perchlorate Precipitation of Samples for Lactate/Pyruvate Ratios, Glycerol and Acetoacetate:**

For each sample:

- Prepare 2 tubes each with 500 µl of ice cold 0.46 mol/L perchloric acid.
- Keep cold at the bedside on an ice pack.
- Collect blood into a lithium heparin tube.
- IMMEDIATELY pipette 100 µl of the sample into each of the perchloric acid tubes.
- Mix vigorously, transport to the laboratory on the ice pack.
- Centrifuge within 10 minutes at 4°C, 3000 rpm for 5 minutes.
- Freeze supernatant in separate tubes and transport frozen.

Please note that

1. any delay in sample precipitation will result in rapid deterioration of the analyte level.
2. our method requires that the proportion and concentration of perchloric acid is strictly adhered to in order to produce reliable results. Manufacturers supply perchloric acid at a variety of strengths.

Please prepare the working perchloric acid as specified below:

Stock perchloric acid

Supplied by manufacturer

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60 % w/w (SG 1.54)

70 % w/w (SG 1.70)

Preparation of 0.46 mol/L perchloric acid

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2.50 ml stock made up to 50 ml with distilled water

1.94 ml stock made up to 50 ml with distilled water

Keep the working reagent in a plastic bottle at 4 °C.

Chemical Pathology

Great Ormond Street Hospital for Children