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untitled protocol V.1

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ABSTRACT

Cattle's blood component is compressed using centrifuge (5000 rpm for 10 minutes), then supernatant (erythrocytes) collected. Erythrocytes with a ratio of 3:1 (serum:supernatant), treated with initial mixing each with HCl (0.5 M) NaOH (0.5 M), and 30% $H_2O_2$with an initial ratio of 1:1 (v/v). Each variable then treated by mixing $SnCl_2$(1 M, 1:1 v/v), oleic acid (2:1 v/v), and $O_{2(g)}$ (0.5 L/m, 60s). The best sample then purified by heat about 800^oC for 120 minutes.The highest calculated total iron mass is 240000 µg/100 ml (NaOH + oleic acid). Sample purification has increased the iron concentration up to 46.30% (m/m%).

GUIDELINES

Beware to react the blood with peroxide because it will produces bubbles

MATERIALS

NAME	CATALOG #	VENDOR
Sodium Hydroxide	View	Sigma Aldrich

STEPS MATERIALS

NAME	CATALOG #	VENDOR
Sodium Hydroxide	View	Sigma Aldrich

MATERIALS TEXT

[M]**0.5 Molarity (M)**

37 °C

00:30:00

Sodium Hydroxide
by Sigma Aldrich
View

10 rpm Mix with sample for 20 seconds

Sample preparation

1

Compress the whole blood sample from cattle. **6 ml** **37 °C** **00:10:00**

Mini-centrifuge
Centrifuge

Fisher S67601B

Any standard mini centrifuge with adapters for different tube sizes will suffice

5000 rpm

2 Mix **2 ml** **blood sample** sample with **2 ml** **NaOH** **37 °C** **00:00:30**

0.5 Molarity (M)

Sodium Hydroxide
by Sigma Aldrich
View

dark green solution with strong odor

10 rpm **after we rest the mixed solution for 30 seconds**

3 Chelate reaction by adding **4 ml Oleic acid** into the previous mixed sample solution then let it sit for **00:00:30** . After that, mixed them by **10 rpm** for **00:00:30** .

Centrifuge
Benchtop Centrifuge
Eppendorf 5405000441
Any benchtop centrifuge will suffice