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INSTRUMENT STANDARD OPERATING PROCEDURE MANUAL

College of Medicine



SAFETY AND LABORATORY COOMMITTEE, C.O.M, K.F.U.

Prepared by

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Document History

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SOP	First Draft on SOP for the operation of Inductively coupled plasma (ICP)	2-12-2020	Lolwa Al helal Nourah Alshebli

1. OBJECTIVE

- ☐ The document describes the operation of Inductively coupled plasma (ICP)
- ☐

2. SCOPE

It measures more than 80 minerals, excluding gases

3. RESPONSIBILITIES

- ☐ It is the responsibility of designated personnel in the lab to train staff and students on this procedure and to ensure adherence to this procedure under supervision.
- ☐ It is the responsibility of designated personnel (staff or Student) to follow the instructions of this procedure under supervision.

4. REFERENCES

- ☐ **Inductively coupled plasma (ICP) Pilkin elmar USA manual.**

5. DEFINITIONS

- ☐ Mention the full form of any abbreviations used.
- ☐ Mention the standard definition of any term used.

6. SAFETY PRECAUTIONS

Dealing with acids
High air pressure 80
The high temperature reaches 1300
High voltage
Toxic fumes
Hazardous waste heavy metals

7. PROCEDURE FOR OPERATING Inductively coupled plasma (ICP)

7.1. Turning on the instrument:

- ☐ Open argon gas cylinder
- ☐ Open nitrogen gas cylinder
- ☐ On air compressor
- ☐ On recirculation and check level oil
- ☐ Insert plug in electric
- ☐ Turn on icp

7.2. Software Operation.

Winlab software

7.3. Steps of the Procedure

- ☐ Press icon winlab32
- ☐ Wait communication generator and spectrometer
- ☐ Create method OR open method
- ☐ From analysis chose new calibration OR recall calibration
- ☐ Insert sample in autosampler
- ☐ On plasma generator

7.4. Turning off the Instrument

- ☐ Off plasma generator
- ☐ Remove sample from atosampler
- ☐ Close software winlab
- ☐ Close all cylinders and air
- ☐ Remove all plug from electric

7.5. Warning

**The presence of a special cooling room and high pressure electricity
. An exhaust fan in the room**



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Safety and Laboratory Committee