# A case of low urine creatinine

| HOSP # | | WARD | Sample from porphyria laboratory |
|---|---|---|---|
| CONSULTANT | Dr. Heleen Vreede | DOB/AGE | 29y Female |

## Abnormal Result

[redacted] F 29 y [redacted]

Urine;

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| F.N. | | Alt | | RN [redacted] | Collection | 28/02/2020 | ? |
| Hos | Groote Schuur Hospital wc GSH | | | 021 404 9111 | Received | 03/03/2020 | 15:24 |
| Wrd | Porphyria Laboratory K47 | | | 406 6206 | Registered | 03/03/2020 | 21:15 |
| Doc | [0DR] Doctor In Charge . | | | | | ePR | Detail |

| Test Set | Staff Notes | Test Item | Result | Units | Normal Values | Previous Resul 1 |
|---|---|---|---|---|---|---|
| UCREA | | Urine creatinine | < 0.1 | mmol/L | | |

## Presenting Complaint

Upon signing blood results out, a creatinine result was measured by the analyzer as <0.1 mmol/L on a urine sample.

## History

Clinical History was not available, but in my personal experience at the time, I haven’t seen such a low urine creatinine yet.

The possibilities in my mind, was that this was either a serum sample and could perhaps be incorrectly sent / registered from the Porphyria lab as serum, hence the result being < 0.1 mmol/L (<100umol/L if translated into serum reporting units).

# Examination

The sample smelt and looked like urine. According to our new registrar, Mrs. Mariam Mahomed, it also tasted like urine. I was personally not capable of this task, so we decided to rerun the sample.

Mrs. Bilqees Jacobs, our technologist on the bench this day was of opinion that when such a low result is seen, it is usually due to a bubble aspirated by the analyzer's sampling probe.

# Laboratory Investigations

| [redacted] | | | F | 29 y | [redacted] | | |
|---|---|---|---|---|---|---|---|
| Urine; | | | | | | | |
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|---|---|---|---|---|---|---|
| UCREA | | Urine creatinine | 1.9 | mmol/L | | |

The rerun of the sample as a urine creatinine gave the result as 1.9 mmol/L, more in keeping with a true urine creatinine result.

# Other Investigations

None was necessary, but should the result have been < 0.1 mmol/L on the rerun, we would then have run the sample as a serum on the analyzer to more accurately quantify the value.

# Final Diagnosis

Possibly, a bubble was aspirated by the analyzer's sampling probe and hence it did not pipette enough sample into the

reagent well, or likely not pipette any sample therein.

## Take Home Messages

Try to avoid bubbles in samples.

This brings me to the point: whenever a ” lower than detection limit” is seen, think of the cause:

“Tiny Bubbles!”