

## REQUEST FOR QUOTE:

<b>#Quotation Number:</b>	<b>RFQ202201/001</b>
<b>Description:</b>	<b>CALIBRATION OF X4 TKN/TP DIGESTION BLOCKS AND 1 DIGITAL THERMOMETER</b>
<b>Bid closing date:</b>	12/01/2022 @12PM
<b>Compulsory Briefing Session:</b>	N/A
<b>Plant Address:</b>	R25 Bapsfontein, Norkem Park 1631 <a href="http://www.erwat.co.za">www.erwat.co.za</a>
<b>Contact Person</b>	Kgomotso
<b>Contact Number</b>	011 929 7014
<b>Validity period</b>	3 Days

Bids are hereby invited to Calibration of 4X TKN/TP digestion blocks and 1 digital thermometer

### Specification

#### **•DIGESTION BLOCKS CALIBRATION SPECIFICATIONS**

- Must be calibrated for temperatures as per table and program 1.  
(If the temperatures and time to reach the correct temperature is not correct, it  
Must be adjusted accordingly).
- Add your measurement capabilities on the table as per your Schedule of accreditation.

The following information must appear on the calibration certificate:

- A "graph" indicating the exact time and temperatures throughout the whole program for each digestion block.
- Temperature checks must be done on at least 5 different point/holes covering the whole digestion block area.
- A diagram and table with an indication of the different areas/holes where the temperatures were checked for specified periods.
- A table with the minimum, maximum and average
- temperatures for each of the specified temperatures (200 and 360 °C)

The controller's programs must be adjusted to fit the specifications if found to be not correct.

Add any additional costs (e.g.) transport must be added to your quotation?

The calibration of the blocks must be done in-house.

TABLE 1:

Block no	For Method:	Temperature	Method acceptable temp	Location
Block C	<ul style="list-style-type: none"> <li>• TKN</li> <li>• TP</li> </ul>	<ul style="list-style-type: none"> <li>• 200°C</li> <li>• 360°C</li> </ul>	<ul style="list-style-type: none"> <li>• <math>\pm 10^{\circ}\text{C}</math></li> <li>• <math>\pm 10^{\circ}\text{C}</math></li> </ul>	FIA Lab
Block E	<ul style="list-style-type: none"> <li>• TKN</li> <li>• TP</li> </ul>	<ul style="list-style-type: none"> <li>• 200°C</li> <li>• 360°C</li> </ul>	<ul style="list-style-type: none"> <li>• <math>\pm 10^{\circ}\text{C}</math></li> <li>• <math>\pm 10^{\circ}\text{C}</math></li> </ul>	FIA Lab
Block F	<ul style="list-style-type: none"> <li>• TKN</li> <li>• TP</li> </ul>	<ul style="list-style-type: none"> <li>• 200°C</li> <li>• 360°C</li> </ul>	<ul style="list-style-type: none"> <li>• <math>\pm 10^{\circ}\text{C}</math></li> <li>• <math>\pm 10^{\circ}\text{C}</math></li> </ul>	FIA Lab
Block G	<ul style="list-style-type: none"> <li>• TKN</li> <li>• TP</li> </ul>	<ul style="list-style-type: none"> <li>• 200°C</li> <li>• 360°C</li> </ul>	<ul style="list-style-type: none"> <li>• <math>\pm 10^{\circ}\text{C}</math></li> <li>• <math>\pm 10^{\circ}\text{C}</math></li> </ul>	FIA lab

**To be calibrated as follows:**

**Dermotech digesters program: Block C and G**

- Heat up to  $200^{\circ}\text{C} \pm 10^{\circ}\text{C}$  within 30 minutes
- Stay constant at  $200^{\circ}\text{C} \pm 10^{\circ}\text{C}$  for one hour
- Increase temperature to  $360^{\circ}\text{C} \pm 10^{\circ}\text{C}$  within 30 minutes
- Stay constant at  $360^{\circ}\text{C} \pm 10^{\circ}\text{C}$  for one hour

**Velp digesters program: Block E and F**

- Heat up to  $200^{\circ}\text{C} \pm 10^{\circ}\text{C}$  within 15 minutes
- Stay constant at  $200^{\circ}\text{C} \pm 10^{\circ}\text{C}$  for one hour
- Increase temperature to  $360^{\circ}\text{C} \pm 10^{\circ}\text{C}$  within 15 minutes
- Stay constant at  $360^{\circ}\text{C} \pm 10^{\circ}\text{C}$  for one hour



Digestion block



## Controllers

### Digital thermometer Calibration temperatures for digital thermometer and probe.

Calibration Temperatures °C	Service provider to complete: Measurement capabilities expressed as uncertainty
200	
360	

This thermometer is used to verify the temperature of our TKN/TP blocks

The method temperatures are 200 and 360 ° C  $\pm 10^\circ$  C

**Measurement capability required :**

- 200°C - 360°C -  $\leq 1^\circ$ C

**Compulsory criteria**

- The calibration of digestion blocks must be done in-house.
- Calibration certificate must be delivered to the laboratory within 5-10 days after calibration.

Please e-mail your quotation to [rfq@erwat.co.za](mailto:rfq@erwat.co.za)