



**Bringing Scientific and Technical  
Resources to the African Continent**

## **ADVANCES IN MICROBIOLOGY TESTING IN NAIROBI 26<sup>th</sup> – 30<sup>th</sup> June 2023**

### **PURPOSE**

The purpose of this course is to provide a practical approach where participants will be trained in the practical concepts of water and food microbiology. The course will include practical aspects (80%) and theoretical aspects (20%). ***All practical aspects will include the requirements for laboratory accreditation (ISO 17025:2017).***

### **WHO SHOULD ATTEND**

The course is aimed at people working in the water and food industry who require knowledge on techniques for the microbiological analysis of water and food as well as the interpretation of results. Industry, Municipalities, Government Departments, Water Boards, Water Bottlers are among the bodies who may find this course useful and laboratories interested in obtaining accreditation.

### **COURSE DURATION**

The course will run over a period of four days. Specific requirements of the laboratory with regards to selection of methods to be demonstrated will be included.

### **COURSE MATERIAL**

Course manual will be supplied to all participants. Testing and presentation equipment as well as consumables to be supplied by the participating laboratory. Methods covered during practical sessions will be based on the requirements of the laboratory.

<b>Day 1</b> <b>26/06/2023</b>	08.30 – 9.00	➤ <b>Registration</b>
	09.00 – 10.00	➤ Laboratory safety ➤ Quality assurance in the microbiological laboratory
	10.00 – 10.30	<b>Health Break (Tea/ Snacks)</b>

	10.30 – 13.00	<ul style="list-style-type: none"> <li>➤ Method quality control (internal and external)</li> <li>➤ Method validation and uncertainty requirements</li> </ul>
	13.00 - 14.00	<b>Health Break (Lunch)</b>
	14.00 - 16.30	Laboratory Accreditation (ISO 17025:2017) overview <u><b>Practical</b></u> <ul style="list-style-type: none"> <li>➤ Preparation of culture media, selective and non-selective</li> <li>➤ Sterilization of media</li> </ul>
<b>Day 2</b> <b>27/06/2023</b>	09.00 – 10.00	<b><i>Practical</i></b> <ul style="list-style-type: none"> <li>➤ Quality control and storage of media</li> <li>➤ Maintenance and verification procedure for control / reference cultures</li> </ul>
	10.00 – 10.30	<b>Health Break (Tea/Snacks)</b>
	10.30 – 13.00	<ul style="list-style-type: none"> <li>➤ Calibration, maintenance and verification of equipment</li> <li>➤ Preparation of samples (water, food)</li> <li>➤ Serial dilutions</li> </ul>
	13.00 – 14.00	<b>Health Break (Lunch)</b>
	14.00- 16.30	<b><i>Practical cont.</i></b> <ul style="list-style-type: none"> <li>➤ Membrane filtration technique (water)</li> <li>➤ Pour plate technique (water, food)</li> <li>➤ Spread plate technique (water, food)</li> </ul>
<b>Day 3</b> <b>28/06/2023</b>	09.00 - 10.00	<b><i>Practical cont.</i></b> <ul style="list-style-type: none"> <li>➤ Quality control procedures</li> <li>➤ Incubation</li> <li>➤ Interpretation and use of calibration certificates</li> </ul>
	10.00 – 10.30	<b>Health Break (Tea/Snacks)</b>
	10.30 – 13.00	<ul style="list-style-type: none"> <li>➤ Counting of bacterial colonies (24 hours)</li> <li>➤ Confirmation procedures</li> </ul>
	13.00 – 14.00	<b>Health Break (Lunch)</b>

	14.00- 16.30	➤ Documentation of results and information obtained during analysis.
<b>Day 4</b> <b>29/06/2023</b>	09.00 - 10.00	<b><i>Practical cont.</i></b>  ➤ Precision and control charts for microbiological results
	10.00 – 10.30	<b>Health Break (Tea/Snacks)</b>
	10.30 – 13.00	➤ Use and evaluation of proficiency test results
	13.00 – 14.00	<b>Health Break (Lunch)</b>
	13.00 – 16.00	<b><u>Practical and Presentations</u></b>  ➤ Counting of bacterial colonies (48 hours) ➤ Reporting, evaluation and discussion of results obtained during practical sessions
<b>Day 5</b> <b>30/06/2023</b>	09.00 – 10.00	<b><i>Practical and Presentations cont.</i></b>  ➤ Interpretation of results
	10.00 – 10.30	<b>Health Break (Tea/Snacks)</b>
	10.00 – 13.00	➤ Use of indicator organisms in water quality ➤ Use of test kits
	13.00 – 14.00	<b>Health Break (Lunch)</b>
	14.00- 15.00	Closing Ceremony and Issue of Certification
<b>26<sup>th</sup> – 30<sup>th</sup> June 2023</b>  <b>Deadline for Registration</b> <b>14<sup>th</sup> June 2023</b>		<b>COST KENYA SHILLINGS 78,880.00 OR \$ 800</b> <b>Registration to be send to <a href="mailto:c.oyugi@chromafrica.co.ke">c.oyugi@chromafrica.co.ke</a> and <a href="mailto:info@chromafrica.co.ke">info@chromafrica.co.ke</a></b>

*Chrom Africa Instrumentation Services Limited: Buru Buru Business Complex Mumias South Road, Suite No.26 P.O Box 4963-00100, Nairobi, Kenya. Telephone: +254 – (20)2594918,  
US Operations: St. Paul, Min, USA Telephone: +1 651-731-3670  
Website: [www.chromafrica.com](http://www.chromafrica.com) Email; [info@chromafrica.co.ke](mailto:info@chromafrica.co.ke) or [info@chromafrica.com](mailto:info@chromafrica.com)*