



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

**TRAINING ON; REAL TIME POLYMERASE CHAIN REACTION(RT-PCR) FOR IDENTIFICATION OF MICRO-
ORGANISM; KISUMU –KENYA 3rd -7th July 2023**

Day 1 3/07/2023	08.30 – 9.00	➤ Registration
	09.00 – 09.30	➤ Principles and use of Real-Time PCR system
	09.30 - 10.00	➤ Explain the basic steps involved in PCR
	10.00 – 10.30	Health Break (Tea/ Snacks)
	10.30 – 13.00	➤ Identify the components of PCR, reverse transcription PCR, and PCR product analysis
	13.00 - 14.00	Health Break (Lunch)
	14.00 - 15.00 15.00 – 16.30	➤ Standard operating procedure for PCR system ➤ Requirements of lab setup, instruments and software, dispensable and non-dispensable controls.
Day 2 04/07/2023	09.00 – 10.00	➤ Basics of data analysis such as amplification plots, how to obtain Cq values, and melting curves analysis Demonstration o
	10.00 – 10.30	Health Break (Tea/Snacks)
	10.30 – 13.00	➤ Standards, Reagents, media preparation for testing of, Ecoli, Clostridium botulinum, Vibrio cholera
	13.00 – 14.00	Health Break (Lunch)
	14.00- 16.30	➤ Assay design and validation –reagents, probes and unspecific dyes, repeats, SNPs, secondary structures, specificity.
Day 3 05/07/2023	09.00 - 10.00	➤ Optimization: standard and melting curves, amplification efficiency, specificity, and sensitivity
	10.00 – 10.30	Health Break (Tea/Snacks)

	10.30 – 13.00	➤ Samples processing and testing including identification of <i>E. coli</i> , <i>Clostridium botulinum</i> , <i>Vibrio cholerae</i>
	13.00 – 14.00	Health Break (Lunch)
	14.00- 16.30	➤ Quantification using standard curve such as planning, conducting, analyzing. Testing and identification of following microbes in food and water samples: <i>E. coli</i> 0157, <i>Clostridium botulinum</i> , <i>Vibrio cholerae</i>
Day 4 06/07/2023	09.00 - 10.00	➤ Showing relative quantification of gene expression, quantification models, amplification
	10.00 – 10.30	Health Break (Tea/Snacks)
	10.30 – 13.00	➤ (count....) Showing relative quantification of gene expression, quantification models, amplification
	13.00 – 14.00	Health Break (Lunch)
	13.00 – 16.00	➤ Efficiency correction, selection of reference genes, alternative strategies of normalization.
Day 5 07/07/2023	09.00 – 10.00	➤ Data distribution, choosing the proper, statistical test, p- value - interpretation of results.
	10.00 – 10.30	Health Break (Tea/Snacks)
	10.00 – 13.00	➤ Reporting the test data meeting the requirements of ISO/IEC - 17025 Standard.
	13.00 – 14.00	Health Break (Lunch)
	14.00- 15.00	<ul style="list-style-type: none"> ➤ Exercise on data extraction and interpretation ➤ Understanding for the estimation of measurement uncertainty ➤ Closing Ceremony and Issue of Certification
3rd – 7th July 2023 Deadline for Registration 21st June 2023		COST KENYA SHILLINGS 78,880.00 OR \$ 800 VAT INCLUSIVE Registration to be send to c.oyugi@chromafrica.co.ke and info@chromafrica.co.ke

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