Due to the increasing use of reclaimed water, its quality control has become mandatory for public health protection in many countries. Different legislations include monitoring of parameters such as *Escherichia coli*, intestinal nematodes, *Legionella* spp., turbidity or suspended solids, and also include the methods that the laboratory must follow. **ielab** has developed a proficiency testing scheme (PTS) for reclaimed water and this work presents the preparation of intestinal nematode eggs samples for this PTS and the statistical approach followed.

**INTRODUCTION & OBJECTIVES**

**MATERIAL, METHODS & RESULTS**

**IELAB (PT PROVIDER)**

1) **SAMPLES PREPARATION**

Ten mL of reclaimed water spiked with defined concentration of different nematode eggs quantified using microscope: *Ascaris lumbricoides*¹, *Trichuris* spp.², *Taenia solium*³, *Diphyllobothrium* spp.⁴, *Fasciola* spp.⁵ and/or *Schistosoma* spp.⁶

2) **SAMPLES DELIVERY**

3) **ANALYSIS OF THE SAMPLES**

4) **RESULTS SUBMISSION**

5) **ROUND REPORT ISSUE**

**LABORATORY PARTICIPANT**

(More than 35 laboratories)

- 1mL direct IDENTIFICATION
- 9mL + 10 L water QUANTIFICATION (whole process)

- **HOMOGENEITY AND STABILITY**
  - Flow cytometry

- **STATISTICAL ANALYSIS**
  - (ISO 13528)

- **✓ Kernel density distribution**
- **✓ Recovery study** to show the effect of the concentration process (55%)
- **✓ Calculation of the Assigned value and its Uncertainty**
- **✓ Evaluation of species Identification (90% correct identification)**
- **✓ Performance assessment: z-score calculation (95% z-score ≤ |2|)**

**CONCLUSION**

The use of flow cytometry technology in the assays of nematode eggs samples facilitates the performance of homogeneity and stability studies. The samples used in this scheme are suitable for the assessment of laboratory performances for analysing this parameter in reclaimed water.