Quick Guide

CheckN'Safe™ *E.coli*

355-4700/355-4720 • *Escherichia coli* analysis in recreational bathing waters (sea water, inland water)

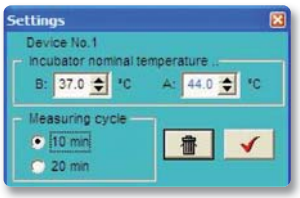
AFNOR Validation

Start

XplOrer64™ System

- Switch-on respectively the uninterruptible power source (UPS), then computer (printer if necessary) and finally the XplOrer64™ System

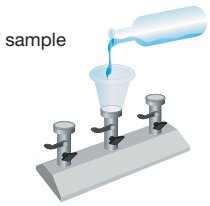
XplOrer64_Manager.exe.lnk



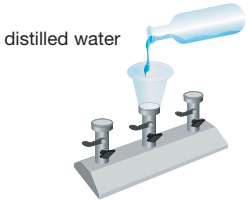
- Start the **XplOrer64 Manager** software by cliquing on its icon
- Menu **Start**, **Start focused instrument**
- Set the temperature of incubator(s) at **44°C** and the measuring cycle on **10 minutes**
  NB: Incubator A (top) will be preferentially used if Enterococci analyses are performed in parallel
- **Warm-up the incubator(s) defined for 30 minutes**

Routine Sample Preparation

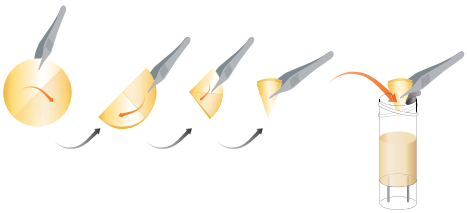
- Prepare the necessary CheckN'Safe™ tests into a rack and keep them **at ambient temperature at least 1 hr before use**



- Prepare the necessary sterile caps and open the seals of CheckN'Safe
- Place a membrane filter composed of cellulose esters, diameter Ø 55 mm, nominal pore of 0.45 µm, on a membrane filters apparatus
- **Filter 100 ml of sample**

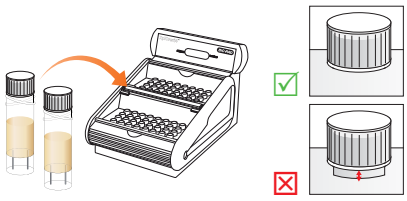


- Rinsing by **filtration of 50-100 ml of sterile deionised or distilled water**



- Using sterile tweezers, fold twice the membrane in a cone shape and inoculate it **tip downside** into the CheckN'Safe test
  NB: The entire membrane has to be immersed inside the culture medium broth. If necessary, rock the vial gently avoiding the formation of foam
- Add a sterile cap on each CheckN'Safe test

Sample Insertion



- Place CheckN'Safe *E.coli* into incubator(s) warm-up at **44°C**
- Verify that each CheckN'Safe test is correctly inserted
- Warming-up of tests inserted start **for 1 hr**

Please read the instruction manual for complete and detailed instructions.

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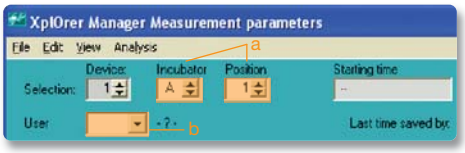
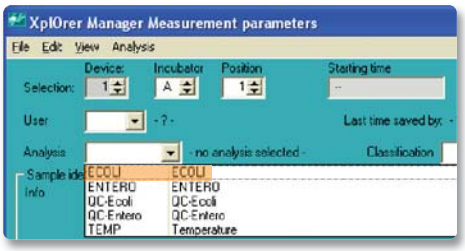
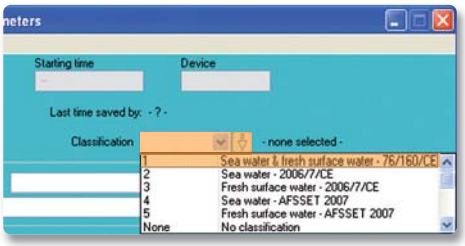
Measurement Parameters



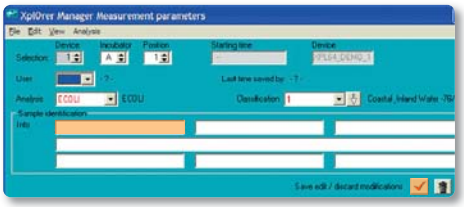
- In the main window **XplOrer64 Manager Measurement Parameters**, select the option **View** and **Parameters**:
  a. Select an **Incubator** to parameter and the position **1**
  b. Select an **User**



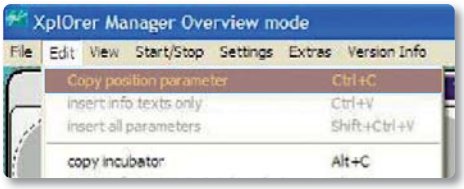
- Select the **ECOLI** analysis (QC ECOLI calibration is dedicated for the internal monitoring of the culture medium performances)



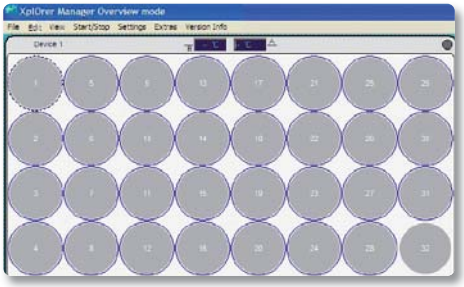
- Select a **Classification** for the results interpretation, according to the origin of the water sample and the directive to follow
- Confirm rapidly these settings by clicking on the ⇩ button



- Fill up at minimum the **INFO1** identification field. This step could be performed later at once for all samples, within the **Edit table** function of the **Edit** menu
- Confirm these settings by clicking on the ☑ button
- Close this window and confirm by **Yes**



- To set a complete incubator: in the window **XplOrer64 Manager Measurement Parameters**, click **into** the Spot 1 with the mouse
- In the menu, select **Edit** and **Copy position parameter**



- Press **simultaneously shift button** on the keyboard and **click into the Spot 31**
  (NB: spot 32 will be dedicated to the CheckN'Safe Temperature Control cell)
- **Edit** and **Insert all parameters**
- **Edit** and **Clear copy/paste buffer** to clear the buffer. Settings are therefore registered

Results Reading

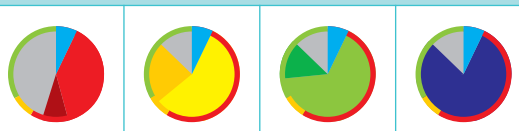
Warming-up Analysis on going

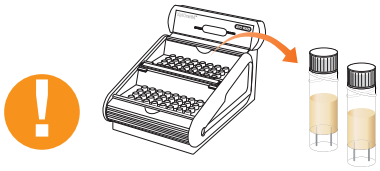
- From the end of the warming-up, samples are analyzed in continue each 10 minutes, for 8 hrs

Approximative Detection Time:

E. coli/100 ml	Detection time
< 41	≥ 8.00 hr
100	6.30 hr = **6 hr 18 min**
250	5.55 hr = **5 hr 33 min**
500	5.09 hr = **5 hr 05 min**
1,000	4.69 hr = **4 hr 42 min**
1,800	4.39 hr = **4 hr 23 min**
2,000	4.34 hr = **4 hr 20 min**
Maximum: 1.59.10⁹	0.1 hr = **6 min**

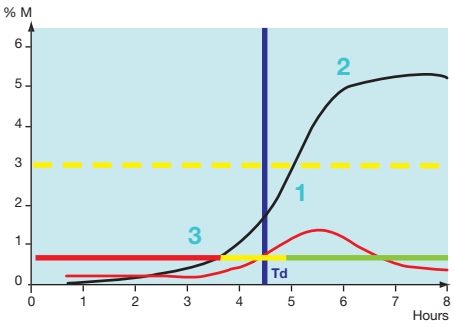
- Real-time analysis moving forward can be followed at any times by simple observation of the spots:

		CheckN'Safe™ *E. coli* analysis (in germs/100 ml)			
Spot appearance in XplOrer64 Manager	in real time…				
	at the end of analysis				
Interpretation	Water quality	**Polluted water**	**Suspicious pollution**	**Good quality**	**Excellent quality**
	E. coli/100 ml	≥ Imperative value	]Imperative value; guidance value[	≤ Guidance value	< Detection limit
76/160/CEE Directive	Coastal and inland water	≥ 2,000	[100-2,000[	< 100	< 41
2006/7/CE Directive	Coastal (sea water)	< 500	[250-500[	< 250	< 41
	Inland water	≥ 1,000	[500-1,000[	< 500	< 41
AFSSET 2007	Coastal (sea water)	≥ 1,000	-	< 1,000	< 41
	Inland water	≥ 1,800	-	< 1,800	< 41



- At the end of the cycle of analysis **and in all cases before discarding the analyzed tests**, finalize the samples identifications with the **Edit table** function of the **Edit** menu

Positive Signal Confirmation



Rules to confirm a positive signal:

1 - The typical profil of the original impedance curve is a sigmoid curve, reaching the 3% threshold during the analysis

2 - This original curve has not to decrease before to reach the "stationnary" phase

3 - **If the Td is determined within the 3 first hours of the cycle, the original curve has to reach its 3% threshold (discontinued yellow line) within 5 hrs.** In this case, the software will automatically delete the measured points before these 3 hrs, and the result will be considered as negative

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Romania *4021 210 1703* ***Russia*** *7 095 721 1404* ***Singapore*** *65 6415 3188* ***South Africa*** *27 11 442 8508* ***Spain*** *34 91 590 5200* ***Sweden*** *46 8 555 12700*
Switzerland *41 (0) 61 717 95 55* ***Taiwan*** *886 2 2578 7189* ***Thailand*** *662 651 8311* ***United Kingdom*** *44 20 8328 2000* ***Vietnam*** *848 823 6757*