

Palintest

Water Analysis Technologies

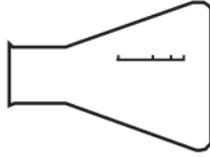


Digital Arsenator

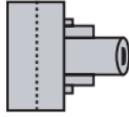
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ZIINST981 V2

Operation Equipment Key



Graduated
Flask



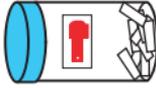
Tri-Filter Arsenic
Trap (Bung)



Hydrogen Sulphide
Removal Filters



Red Filter Slide
(Removal)



Filter Paper
(Labelled Red)



Black Filter Slide
(Detection)



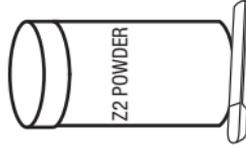
Filter Paper
(Labelled Black)



Arsenator



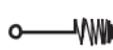
T1 Powder
and Spoon



Z2 Powder
and Spoon



Dilution
Tube



Cleaning
Brush



Colour
Chart

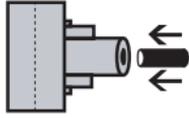


Waste Disposal Bag,
Gloves & Forceps

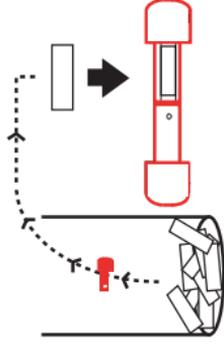
Stage 1: Loading bung device



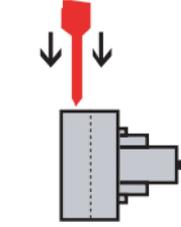
Take one Hydrogen Sulphide Removal Filter and insert into the bottom end of the bung.



Take Red Filter Slide and open.



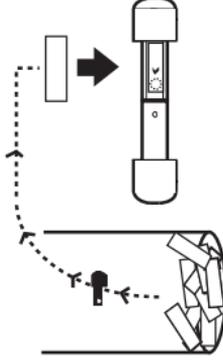
Take one Filter Paper from red labelled pot, use forceps and/or gloves to insert into position ensuring the filter paper is evenly covering the hole. Then firmly close slide holder, taking care to locate the pins in the slide holder correctly.



Get Bung device and **ONLY** insert the Red Filter Slide into the top slot.

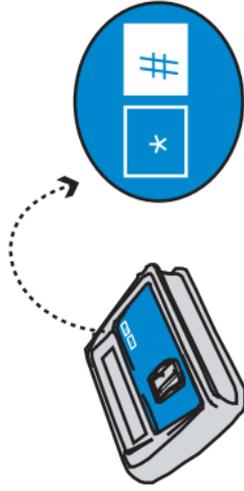


Take Arsenic Filter Slide and open.

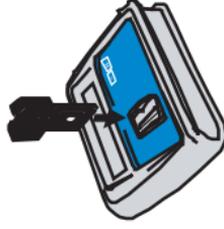


Take one Filter Paper from black labelled pot, use forceps and/or gloves to insert into position. (repeat filter paper insertion as before).

Stage 2: Calibrating the Arsenator

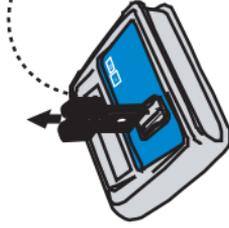


Take the Arsenator and press any key to switch on.
This will then say 'insert Slide'.

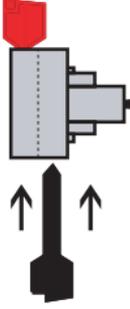


Take the loaded Black Filter Slide you will use for analysis, and insert in the Arsenator.

00:03



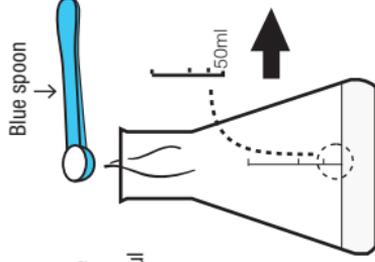
Then Arsenator will instruct to 'Remove Slide', once slide is removed this then instructs to 'Run Test', which automatically activates timer on the Arsenator.



Remove the Black Filter Slide from the Arsenator and insert into the bottom slot of the bung.

Stage 3: Sample Preparation

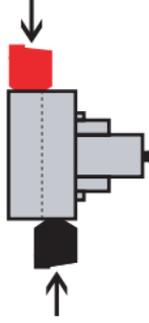
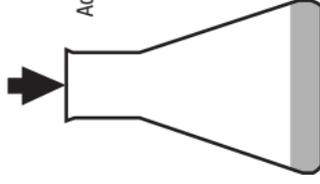
Take 50mL of sample water, in a flask, and add One level spoonful of T1 Powder



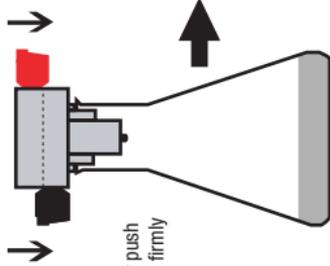
White spoon



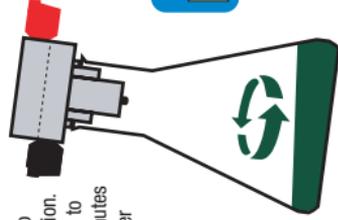
Add One level spoonful of Z2 Powder



Pick up loaded bung device and check filter slides are fully pushed into bung.



Immediately push bung device firmly in to flask.



Swirl the flask to initiate the reaction. Then leave flask to stand for 20 minutes (referring to timer on Arsenator)

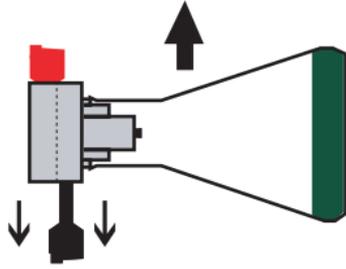


Black Filter Slide will collect the Arsenic gas.

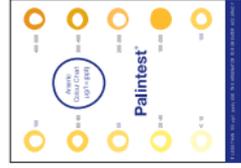


Red Filter Slide removes excess Arsine gas.

Stage 4: Arsenic Measurement



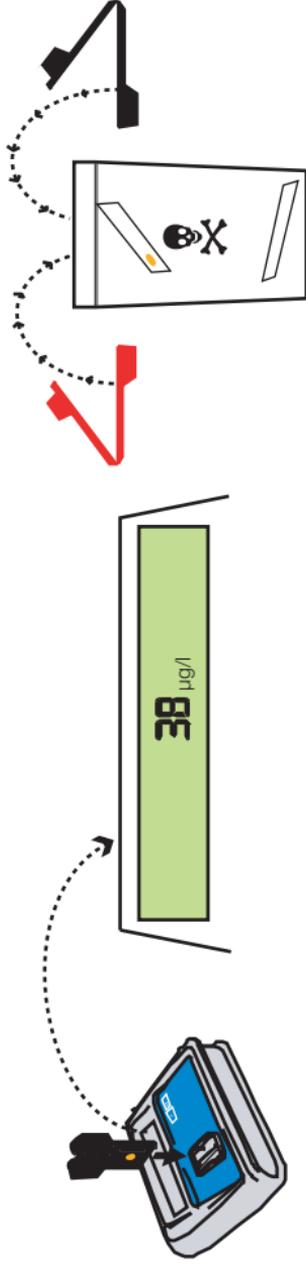
Remove Black Filter
Slide from Bung device.



Record corresponding Colour. Match from colour chart to obtain result in $\mu\text{g/l}$ (ppb).

If test result reads above
 $500\mu\text{g/l}$ (ppb) use dilution
tube with de-ionised water
and convert accordingly.
Then go back to stage 1
and do test again.

Stage 5: Using the Arsenator



If visual reading is LESS than 100µg/l (ppb).
Insert Black Filter
Slide into Arsenator.

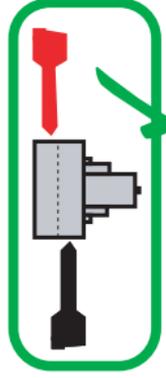
Observe and Record result in µg/l (micrograms per litre). If preferred record in (ppb) i.e 38µg/l = 38 ppb.

Finally open both Filter Slides and remove Filter Paper from slide holders and dispose of in waste bag provided.

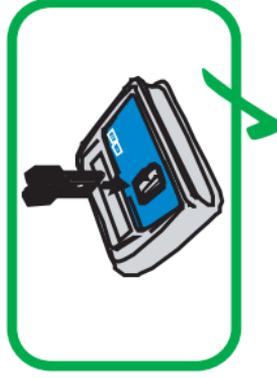
Troubleshooting



DO's



ALWAYS ensure that Filter Slides are inserted in their correct slots in the bung device.



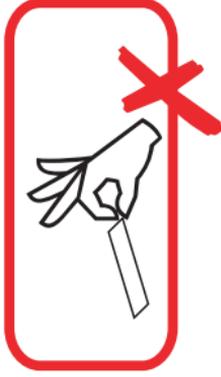
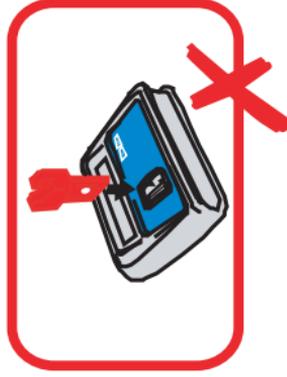
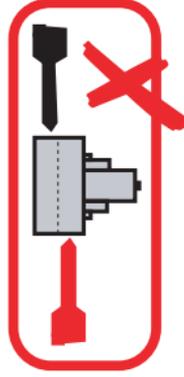
NEVER insert Red Filter Slide in the Arsenator.



ALWAYS handle filter paper, with gloves and/or forceps.



DONT's



ALWAYS insert correct Filter Paper into its appropriate Filter Slide.



Take filter paper from pot marked for Black Filter Slide.



Take filter paper from pot marked for Red Filter Slide.



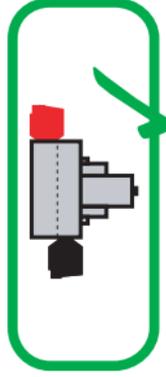
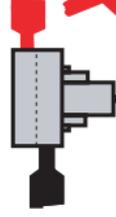
Take filter paper from pot marked for Red Filter Slide.

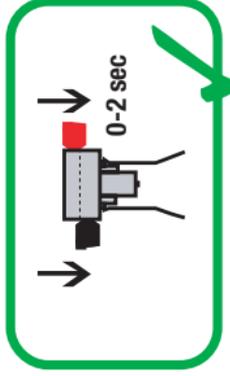


NEVER use a broken Filter Slide. Discard and use new one to ensure gas tight seal.

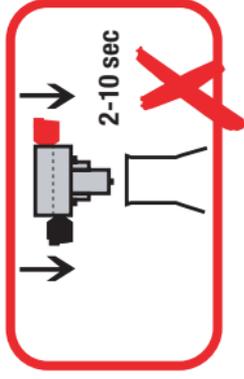


ALWAYS make sure Filter Slides are fully pushed into the bung device.

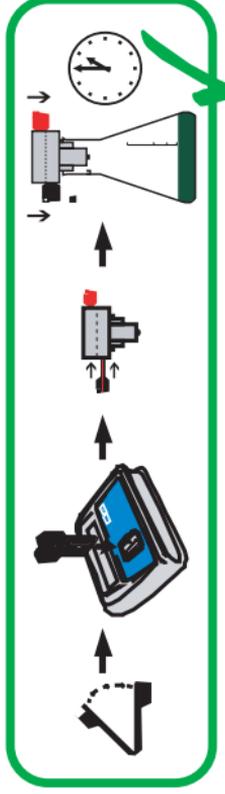




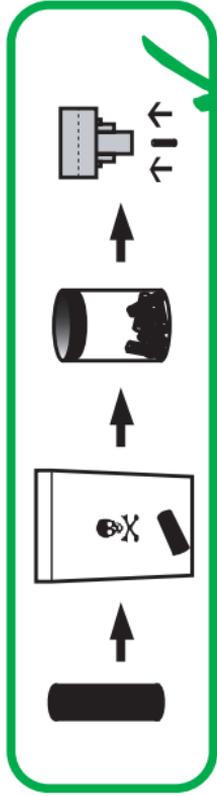
To obtain accurate results, insert bung device **IMMEDIATELY** after adding Z2 powder but before swirling the flask.



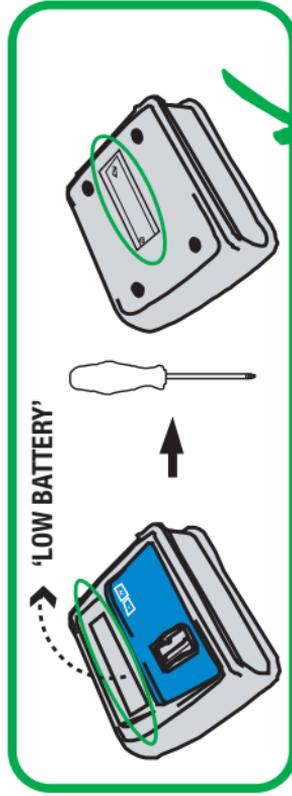
After use, the filter paper in the black slide should have a perfect circular stain. A larger irregular stain indicates a gas leak which will invalidate the result.



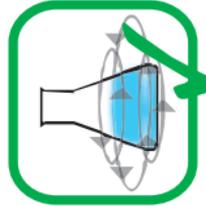
ALWAYS use the **SAME** FILTER PAPER for analysis that has been used for calibration.



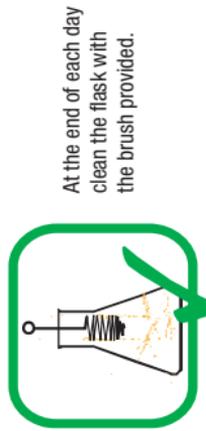
If internal cotton wool turns black within the Hydrogen Sulphide Removal Filter, **DISCARD** in waste bag and insert **NEW FILTER**.



If low battery indicator is displayed, change battery within the next 10 tests.



After every test rinse flask with water from next sample. Swirl, shake and discard solution ready for next test.



At the end of each day clean the flask with the brush provided.

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