

KT401 – Mini Air Ion Tester



Fabric that
generates -ve ions.
- eye shade -

Please refer to instructions that come with the mini air ion tester.

Resolution:

This refers to the sensitivity of the meter. Meter reading of 1 means that the concentration of ions in air is 1×10^4 or 10,000 ions per cc (cubic centimetre) of air. The meter is therefore not suitable for ion source that emits only a low concentration of ions.

It is suitable for use with:

- Air freshener with negative ion generator
- Negative ion clothing / fabric – Nefful / Teviron / Rhovyl / Rovyl'on
- Power balance wrist bands
- Other strong negative ion sources

Energy is needed to generate negative ions. Ion concentration is strongest near the source of ion generation. In theory, negative ions can also be concentrated if ions in the air is attracted to an object thus making the air near the object high in negative ions.

In the case of negative ions from chlorofibre fabric, frictional energy is imparted to the fabric through contact with our body. It is thus necessary to brush gently on the fabric surface to produce negative ions. The amount of ions generated depends on several factors including surrounding humidity, fabric surface area (smooth vs 'rough' or uneven surface).

Here is some Q&A for your reference:

Hi Peter,

I have received the ion meter and have some questions:

1) When I tried to use it on my negative ion clothes (Nefful), the reading keeps changing and does not seem to come up with a final reading. Why is that?

2) Just to confirm, when I need to change the battery, I guess I have to open up the unit. Please confirm.

3) How come it says I have to calibrate with a different unit? Is that necessary?

Regards,

G....

Hi G...,

Glad you got the item safe and sound. It is working as it should.

1) Reading will not stay still as the amount of ions in air changes all the time. You can imagine that some ions get neutralized and others get 'blown' away due to eddies (wind). So concentration of ions changes with time. The meter helps you to 'see' that there is an abundance of negative ions (negative reading of more than 100, often several hundreds and even over 1000 if held close enough to the fabric / source. Fabrics like cotton will not give you negative readings.

2) Yes, to change battery, you will need to open up the unit. See attached to get some idea what is inside the unit.

3) Readings on the mini meter can be correlated to a more robust ion meter (that cost hundreds), however for our purpose, it is not necessary. What most of us want from the mini meter is to show that the source indeed generate negative ions (-ve readings) and the strength or concentration of the ions (reading of several hundreds). A reading of 1 = 10,000 ions per cc of air.

Hope this helps.

Regards,
Peter @ PeterAdam

Hi,

Just a followup question: what puzzles me is why the reading would start off as negative, then drops down by 200 on average each drop until it gets to positive territory and continues the trend in that direction. Can you clarify?

Hi G...,

For the negative readings to be sustained, new -ve ions needs to be generated. For the fabric, -ve ions is generated by gently brushing your fingers across the surface of the fabric.

Theoretically no new ions are formed once there is no new 'energy' (the brushing stop) the readings will 'drop' and what is measured is the background ions which in most cases are more positive.

If you use the meter on a -ve ion generator (an electronic device), a sustained negative reading is observed.

Since the detector surface (the metal plate at the back) is in an exposed position, there is no way to 'control' what gets on to the surface.

By the way that more expensive ion meter (for calibration) I mentioned; it has a built in suction fan that draws measured amount of air to a detector which 'counts' the number of ions drawn in. Even in this case the reading is not constant but at least not as 'random' as the mini meter.

Peter @ PeterAdam

Model KT-401 Mini AIR ION TESTER

1. INTRODUCTION

This Air Ion Tester is designed for test high level concentration of negative or positive air ion. It is effective to test the electric charge on the surface of textile by strict. With it you can estimate whether the air ion generator or air purifier is working in good state. The reading of this tester is correlative to the air ion concentration, but not exactly the number of it. In factor, this tester can only provide you a rough measurement to the air ion sources. Please don't take it as an precision instrument .

3.3 The metal plate on the rear panel of the tester is the sensor of the tester. Do not touch it, Otherwise it will trouble the reading.

3.4 When a "-" symbol displays ahead of the number on the LCD, it means the ions polarity is negative. If nothing, it means the ions polarity is positive;

3.5 The reading will be changed when the distance between the tester and the ion generator been changed. The closer the distance is, the larger the reading will be. But, don't make this distance it too small. Otherwise, it might let to overflow and displays only "1 " on LCD. If you want to know the exact value of the air ion

2. FEATURE

2.1 Test range: $0\sim 1.999\times 10^7$ ions/cc.

2.2 Resolution is 1×10^4 ions/cc.

2.3 Test with textile or clothes.

2.4 Power Supply: 1.5V \times 2 LR44 size batteries

3. OPERATION

3.1 Turn on the power switch.

3.2 Keep your finger touch on the small metal square on front panel; approach sensor, the rear metal plate, towards the ion generator. The reading on LCD represents the polarity and ion concentration. It is suggested to connect your body to the ground with a electric wire. This is helpful to get a stable reading.

concentration, you may calibrate it with a standard Air Ion counter, For example, DLY-3. Measure out in which distance the reading of KT-401 will be equal to DLY-3. Then, keep this distance to test other ion sources.

3.6 Measure textile or cloth:

Use the sensor part, rear metal plate, slightly rub on the surface of the textile or cloth. The information about the ion polarity and concentration generated by friction will be displayed on LCD.

4 When battery low symbol display on LCD, you should replace the old battery with two new LR44 button cells.