## B10-1324-03

# **Aluminum Collecting Sphere EG-03**

### --- Instruction Manual ---

Thank you for purchasing the optional Aluminum Collecting Sphere for the electrostatic generator. Read these instructions carefully and conduct experiments safely by following the described procedure.

#### 1. Specifications and Names of Parts



Specifications (materials and other details)① Aluminum collecting sphere:<br/>Consisting of two aluminum hemispheres,<br/>each 2 mm thick and 50 mm in diameter,<br/>which are pasted together.② Base:Made of resin, including the post.

③ Electrode terminal: Consisting of one each M3 screw and nut.

<u>Accessory:</u> One polyvinyl chloride (PVC) plate, 1 mm thick.

\* The materials and dimensions of the parts are subject to change for improvement without prior notice.

#### 2. How to Use (examples)

Experimenting Electric Line of Force (Electric Umbrella)

- Prepare thin moisture-resistant paper such as pharmaceutical packaging paper. Cut out seven strips, each approximately 2 mm wide and 50 mm long.
- ② Attach one strip to the top of the sphere, and the remainder to the side at uniform intervals.
- ③ Place the sphere on the provided PVC plate (Photo 1).
- ④ Referring to Photo 2, connect the output cables of the electrostatic generator to the electrode terminals of the PVC plate and the sphere, respectively. The negative polarity is connected to



Photo 1. Aluminum Collecting Sphere with Paper Strips Attached



the sphere in the photographs. Experiments yield the same results if you reverse the polarity.



Photo 2. Connection with the Electrostatic Generator



Photo 3. Result of Experiment

(5) Turn the handle of the electrostatic generator slowly. The paper strips are levitated gradually until they float in the air as shown in Photo 3. The user can estimate the direction of the electric lines of force (virtual lines) by noting the direction of the floating strips.



This sign indicates the risk of personal injury or damage to equipment.

The base and the post are made of acrylic resin. Do not wipe with alcohol or other solvents nor allow them to spill over the acrylic parts. Prevent severe shocks such as fall to the housing. (The housing will be cracked or split.)



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