

MicroSphere Heater System

(Dog Training Aid)



The **MicroSphere Heater System** is a purpose built tool to assist in the training of canines on the detection of many explosives including peroxide based explosives Triacetone Triperoxide (TATP) and Hexamethylene Triperoxide Diamine (HMTD). TATP and HMTD have a high shock sensitivity which makes handling of these energetic materials extremely dangerous. They also have a very short shelf life which makes long term storage difficult. The MicroSphere Heater System solves these challenges in a portable and simple to use package.



Users:

- ✓ First Responders
- ✓ Dog Trainers or Handlers
- ✓ Explosive K9 Teams
- ✓ EOD Teams

MicroSpheres Offer Safescent Technology

Safe-to-Handle MicroSpheres allow for the safe use of volatile explosives. Canine explosive training without risk to the canine or handler.

Increased Explosive Shelf-Life

MicroSpheres drastically increase shelf-life of explosive from days to years

Rugged and Portable System

Allows for safe for transport and handling of volatile substances

Simple System Creates Training Aids Quickly

Device has a simple, easy to navigate interface to ensure consistent and quick creation of explosives for training aids or other uses.



SIMPLE TO USE

1. Insert Microspheres
2. Start Heater
3. Remove TATP
4. K9 Detection



MicroSpheres Offer "SafeScent" Technology

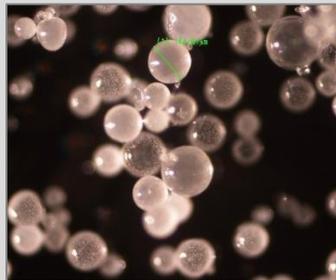


SPEC	MicroSphere Heater
Technology	Microsphere Encapsulated "Safe-Scent" Technology
System	1. Microsphere Heater 2. Test Vials with Microspheres
Weight	197g (6.94oz or .43lbs)
Size (Inches) WxHxD	11.8" x 9.8" x 4.7" (30 x 24.9 x 11.9 cm)
Battery	Internal Rechargeable Lithium Ion
Languages	English
Explosives Types	TATP and HMTD
Accessories	Wall Charger, Quick-Start Guide, Loading Vials, Aluminum Wool



What are MicroSpheres?

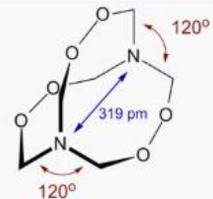
Triacetone peroxide (TATP) and hexamethylene triperoxide diamine (HMTD) are explosives that were used in events such as terrorist bombings in Paris and Brussels. These explosives are made from common household chemicals but are highly unstable and volatile when in pure form. This high sensitivity and vapor pressure make it very dangerous to handle which in turn makes it difficult to train



explosive detection dogs on or develop trace explosive detection instruments with.

A method of encapsulating these explosives in polymer to render them safe for handling and transport was developed. These polycarbonate MicroSpheres contain only a low percentage of explosive, such as TATP, that has been demonstrated to last for years yet produce pure explosive vapor when heated at the designated heat-profile. The MicroSpheres consist of a "Core Material" which are the explosives such as TATP or HMTD, and a "Polymer Matrix" which is the surrounding material that protects the explosive. This approach provides canine handlers and instrument vendors with safe access to stored hazardous explosives at trace levels for use in detection, calibration, and validation of instruments as well as the training of explosives detecting canines.

Hexamethylene triperoxide diamine



Acetone peroxide

