



Burkard Pollen Sampler

SNEEZE GAZETTE™

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How Is Pollen Counted?

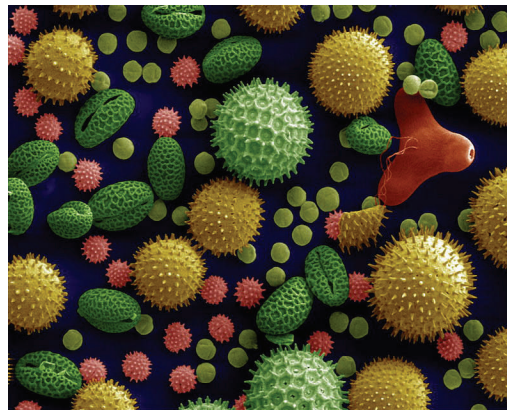
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Pollen is a powdery substance produced by seed-bearing plants.

Many allergy sufferers rely on the accuracy of pollen counts available to them in their geographical area. Ever wonder how exactly pollen is counted? The process of collecting airborne pollen and counting it is known as "aeroallergen sampling". The choice of a sampling method depends on the environmental conditions that affect the allergen. The sampling device chosen depends on the allergen in the air, its size, concentration and viability, the detection method selected and the skills of the technician. With help from a grant from the Center for Allergy, Asthma, and Immunology, staff at the Waterbury Hospital Hematology Lab use the Burkard sampler (above, left) to collect and count pollen samples every year from April to October, 5 days a week. The Burkard sampler is a suction device that sucks air through sequential stages or traps each with successively smaller particles. The particles are trapped on a transparent tape which rotates on a drum with an exposure time of 24 hours. The tape is then stained for pollen and mold and placed on a microscope slide. The technician then counts the number of particles visible in the field. This allows for determination of the number of molds

1. A microscope slide is coated with a sticky substance and inserted in the Burkard Pollen Sampler, shown above left.
2. Air is pulled by a vacuum through a slit in the instrument and is deposited onto the sticky slide.
3. At the end of a 24-hour period, the slide is removed, stained, and read microscopically to determine the quantity and type of pollen and mold.

and pollen concentration in a given volume of air. The formula used to calculate is based on the particle count, microscope field size, the slit and flow rate of the Burkard, and the exposure time.

A Rotorod® sampler is used as a backup method. The same principal applies except the pollen and mold is deposited onto a rod that spins on a set schedule. The rod is stained and read under a microscope to determine the number of pollens or mold.

By Christopher Randolph, MD

A daily recording of the pollen and mold count can be heard by calling 203-573-6116, by going to www.waterburyhospital.org, or for Pollen and Mold Counts and more:

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