
HISTORY

- 1912** Wilbur Scoville develops original Scoville sensory method of heat analysis.
- 1960s** The American Spice Trade Association (ASTA) slightly revised the Scoville sensory method and adopted ASTA Method 21.0 (sensory method). Like the Scoville method, this standard was highly subjective and had a large variability of results.
- 1980s** The ASTA developed and introduced the ASTA Method 21.1 (HPLC method).
- 1996** The American Organization of Analytical Chemists (AOAC) issued its Official Method 995.03: *Capsaicinoids in Capsicums and Their Extractives*. Like ASTA methods 21.0 and 21.1, this method maintained pure capsaicin as 15 million SHUs.
- 1997** The ASTA revised analytical methods 21.0 (sensory method) and 21.1 (HPLC method). While maintaining that pure capsaicin was 15 million SHUs, these methods had other problems. For instance, they were both developed by a single laboratory without input from other industry experts, and they required the use of some chemicals no longer deemed safe by the Federal Government.
- 1998** The ASTA introduced methods 21.2 (sensory method) and 21.3 (HPLC method) and for the first time, classified the heat rating of pure capsaicin as 16 million SHUs.
- 1999** The AOAC revised Method 995.03 to state that pure capsaicin was 16 million SHUs, coinciding with ASTA Method 21.3.
- 2001** The Executive Committee of the ASTA Technical Group declared that ASTA methods 21.0 and 21.1 were now obsolete.
- 2003** AOAC revised Method 995.03.

The analysis for the heat-bearing components of red peppers was developed by pharmacologist Wilbur Scoville in 1912. His original “Scoville Method” used a panel of five human taste-testers to determine the Scoville Heat Units (SHU), or heat level, of various hot peppers. The SHU became the standard by which heat is still measured today.

However, as analytical instrumentation improved and analytical organizations, including the American Spice Trade Association (ASTA) and the American Organization of Analytical Chemists (AOAC), began to collaborate, the methodology for heat determination evolved. The most significant revision over the years has been to redefine the SHU value of pure capsaicin from its original estimate of 15 million SHUs to the accurate, scientifically proven value of 16 million SHUs.