

HOW HOT IS YOUR SPRAY?

The following chart shows how a variety of current brands rate in terms of Scoville value and percentage of total capsaicinoids—the true determinants of the pungency or strength of all defense sprays.

The Scoville Heat Units provided are in accordance with the most current editions of both the AOAC Method 995.03 and the ASTA Method 21.3. The total capsaicinoids are accurate to a tolerance of ±.02 of a percentage point. Pure capsaicin is included for comparison purposes only.

Brand Name	Canister Wt/ Concentration	Scoville Heat Units/ Scoville Value	Total Capsaicinoids
Pure Capsaicin	10%	16,000,000/1,600,000	10%
American Defense (ADR)	10%	2,000,000/200,000	1.25%
BodyGuard (LE-10)	10%	2,000,000/200,000	1.25%
CQB (Level III)	10%	2,000,000/200,000	1.25%
Sabre Red	10%	2,000,000/200,000	1.25%
Cap-Stun	5.5%	2,509,090/138,900	0.86%
CQB (US DoD)	5.5%	2,000,000/110,000	0.69%
Fox Labs	2%	5,300,000/106,000	0.66%
American Defense (ADW)	5%	2,000,000/100,000	0.62%
ATF™	5%	2,000,000/100,000	0.62%
BodyGuard (LE-5)	5%	2,000,000/100,000	0.62%
CQB (Level II)	5%	2,000,000/100,000	0.62%
Punch II & III	5%	2,000,000/100,000	0.62%
Def-Tec (X2)	20%	320,000/64,000	0.40%
Federal Labs	5.5%	1,000,000/55,000	0.34%
Sabre 5.5	5.5%	1,000,000/55,000	0.34%
American Defense (ADB)	10%	500,000/50,000	0.31%
CQB (Level I)	10%	500,000/50,000	0.31%
Sabre Defense	10%	500,000/50,000	0.31%
CTS (1441)	11%	363,635/40,000	0.25%
Def-Tec (First Defense)	10%	320,000/32,000	0.20%
Federal Labs (Pepper 10)	10%	320,000/32,000	0.20%
CTS (1440)	10%	288,000/28,800	0.18%

Toxicologists recommend that agencies use only defense sprays that are labeled with all of their components as well as the absolute concentration of total capsaicinoids, rather than just the oleoresin capsicum percentage and Scoville value

Presented below are the four (4) most common defense spray formulations used by U.S. law enforcement agencies. These formulations reflect the appropriate way each level should be labeled, in accordance with AOAC Method 995.03 and ASTA Method 21.3 in their most current editions:

Listed according to popularity and volume sold.

U.S. DoD

Active Ingredient: 5.5% capsaicin
 Scoville Heat Units: 2,000,000
 Scoville Value: 110,000
 Total Capsaicinoids: 0.69%

LEVEL III

Active Ingredient: 10% capsaicin
 Scoville Heat Units: 2,000,000
 Scoville Value: 200,000
 Total Capsaicinoids: 1.25%

LEVEL II

Active Ingredient: 5% capsaicin
 Scoville Heat Units: 2,000,000
 Scoville Value: 100,000
 Total Capsaicinoids: 0.62%

LEVEL I

Active Ingredient: 10% capsaicin
 Scoville Heat Units: 500,000
 Scoville Value: 50,000
 Total Capsaicinoids: 0.31%