

HYDRO-FORCE

TECHNICAL NOTE 01-04 Effectiveness and Safety of Pepper Spray

Dated January 21, 2004

INTRODUCTION

Pepper spray, also known as oleoresin capsicum, has proven to be a very effective less-than-lethal weapon and is much safer and more environmentally friendly than previously used tear gas substances, CS and CN. With the use of pepper spray as a controlling agent in law enforcement and correctional agencies, a number of questions arise pertaining to its effectiveness and safety. This technical note (01-04) describes findings of current research on pepper spray effectiveness and safety and highlights some of the properties of Hydro-Force pepper spray that make it ideal for use in less-than-lethal weapon systems. Our previous Technical Note 02-99 addresses the strengths of pepper sprays used in less-than-lethal weapons and defense sprays.

SAFETY

In April 2003, the National Institute of Justice (NIJ) issued the findings from two NIJ-funded studies¹ that examined injuries and deaths following the use of pepper spray. One study done in North Carolina police jurisdictions examined injuries sustained before and after the use of pepper spray. The other study looked at in-custody deaths of 63 suspects after pepper spray was used in their arrest.

- The North Carolina study found that the number of injuries to police officers and suspects declined after pepper spray was introduced. Complaints that the police used excessive force also declined.
- The study of in-custody deaths concluded that pepper spray was a contributing factor in the death of two of the 63 cases, both involving people with asthma. In these cases, death was attributed to the disease precipitated by the use of pepper spray. Other factors (such as drug use, disease, positional asphyxia, or a combination of these factors) were found to be the cause of death in the other 61 cases. In addition to concluding that pepper spray did not cause or contribute to death in 61 out of 63 cases, pepper spray was noted to be a relatively innocuous force option, ranking at the low end of the “escalation of force” scale.
- The NIJ report concludes that “the results of all studies discussed in this Research for Practice seem to confirm that pepper spray is a reasonably safe and effective tool for law enforcement offices to use when confronting uncooperative or combative subjects; they provide no reason to stop using this important less-than-lethal weapon.”²

ENVIRONMENTALLY FRIENDLY

Hydro-Force pepper spray is naturally friendly to the environment because all ingredients are food-grade. The same ingredients are used to prepare foods eaten all over the world.

BIODEGRADABLE

Being made of food ingredients, Hydro-Force pepper spray is completely biodegradable. Even the pepper spray “hot” is degraded by prolonged exposure to air and sunlight. To ensure biodegradability Hydro-Force has contracted with an independent laboratory to certify on the basis of actual field tests. This certification is available upon request.

NON-FLAMMABLE

Hydro-Force pepper spray (oleoresin capsicum or OC) chemicals are not flammable, meaning that no fires will be started or advanced by use near another fire. The laboratory has certified that the Hydro-Force solutions are not flammable. This certification is available upon request.

CLEANING

Area cleaning is very easy since Hydro-Force pepper spray is water-based and falls out of the air if not in contact with a person or object. There are no gas clouds or airborne residue that you would have with tear gas. Cleanup is as simple as wiping the area. Hydro-Force *Soothe-Away Plus* lotion is available for removing the pepper spray “burn” from individuals.

CONTINUING RESEARCH

Hydro-Force continues to research new less-than-lethal equipment and chemical solutions. Your questions or comments are welcome. Please contact us.

¹*The Effectiveness and Safety of Pepper Spray*, Office of Justice Programs, National Institute of Justice, April 2003.

²*The Effectiveness and Safety of Pepper Spray*, Office of Justice Programs, National Institute of Justice, April 2003, p. 13.