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Oleoresin Capsicum in Buffalo

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Executive Summary

This report is published with our gratitude to, and the consent of Mr. Scott W. Phillips, author and researcher, and Police Commissioner R. Gil Kerlikowske, Buffalo Police, New York State.

Freeze + P is a chemical agent containing 1% oleoresin capsicum (OC) and 1% orthochlorobenzalmalononitrile (CS), a form of tear gas. The combination of CS and OC is meant to work together. CS causes eyes to tear thereby carrying the OC through the nasolacrimal ducts into the nose and lungs. The inflammatory effects of the agents cause the eyes to close involuntarily, and produces a burning sensation on the skin, and generates a tightness in the chest and breathing difficulty.

Decontamination is achieved by exposure to fresh air. Washing with cold water can also alleviate the chemical effects. Without decontamination, the effects should wear off in about 30 minutes.

Because OC sprays are still fairly new in the field of law enforcement and not ail of the health risks or effectiveness ratings may be known as yet, constant updating and monitoring of the incoming research information should be maintained.

Résumé

Le present rapport est publié avec le consentement de MM. Scott W. Phillips, auteur et chercheur, et R. Gill Kerlikowske, Commissaire de la police de Buffalo (New York). Nous tenons à leur exprimer toute notre gratitude.

Freeze +P est un agent chimique à base de 1 p. 100 de capsicine oléorésineuse et de 1 p. 100 d'orthonitrile de chlorure de benzene (CS), un gaz lacrymogene. Læs deux composes sont conçus pour agir ensemble. Le CS provoque le larmoiement, permettant ainsi à la capsicine de passer dans le canal nasolacrymal pour atteindre le nez et les bronches. L'effet inflammatoire de ces agents provoque la fermeture involontaire des paupières. Le sujet éprouve une sensation de brûlure sur la peau et de crispation de la poitrine et a de la difficult6 à respirer.

Une exposition au grand air suffit pour décontaminer le sujet. Le rinçage à grande eau permet Cgalement de dissiper les effets chimiques, qui sans decontamination, durent environ 30 minutes.

Les aerosols capsiques sont relativement nouveaux dans le domaine du maintien de l'ordre et l'on ne connait pas encore tous les risques pour la santé ni même les taux reels d'efficacité des produits. Il faut donc continuer de superviser et d'actualiser les données de recherche.

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Freeze + P in Buffalo

Freeze + P is a chemical agent containing 1% oleoresin capsicum (OC) and 1% orthochlorobenzalmalononitrile (CS), a form of tear gas. The combination of CS and OC are meant to work together. When a subject is sprayed the CS causes the eyes to tear. As the eyes tear the OC is carried through the nasolacrimal ducts into the nose and lungs. The inflammatory effects of the agents cause the subject to close his eyes involuntarily, produces a burning sensation on the skin, and generates a tightness in the chest and difficulty breathing. A subject may also experience a sense of panic as a result of these events. Decontamination is achieved by allowing a person to be exposed to fresh air. Facing a subject into the wind, driving with the car windows open, or facing the subject into a fan are the recommended procedures. In addition, allowing a subject the opportunity to wash with cold running water can alleviate the chemicals effects. Without decontamination assistance, the effects of Freeze + P will wear off in about 30 minutes.

The Buffalo C.A.P. training program clearly discussed these effects and decontamination procedures. (Refer to the section on Training for more information on the Buffalo Lesson Plan) The Buffalo Police Department has also followed the decontamination recommendations by installing two eye wash stations in the central police station, one in the mens room on the first floor outside of Central Booking and one on the cell block level.

An important characteristic of Freeze + P is that it is non-flammable. This is a significant point because there may be many times when an officer has to spray a suspect who may be smoking. Also, Freeze + P contains an ultraviolet dye which lasts up to 48 hours and serves three functions. First, if a suspect that is sprayed manages to escape, and is later caught, the U.V. dye can be used to help identify him. Second, if a citizen files a report with the Internal Affairs Division his complaint can be supported or refuted depending on whether the dye is found or not. Third, if a person claims that an officer used the spray, justified or not, and there is no spray report filed, the presents of the U.V. dye can justify any disciplinary action that may

be taken for the failure to file a report. This information is also covered in the training program.

Buffalo is not the only department in the country that issues Freeze + P to its officers. No less than seven departments, including the Indiana State Police, The Minneapolis Police Department, the Ohio State Highway Patrol, and the Michigan State Police, use Freeze + P. The Indiana State Police have over 1 100 officers carrying the spray with no complaints, no lawsuits, and no known medical problems.

Several police officers from different precincts in the city of Buffalo were interviewed on their use of Freeze + P. This was done to provide an officers perspective on the effects of the spray and how they felt about it overall. The officers were selected randomly, while trying to study a variety of situations (crowd control, defendants effected by drugs and alcohol, V +T encounters). However, due to the difficulty in obtaining face to face interviews, only twelve officers were contacted. While there were interesting results, a more accurate evaluation of the officers feelings about the spray would best be conducted using a survey questionnaire sent to every officer authorized to use the spray.

Results of the survey are as follows:

The survey found that none of the officers experienced any medical problems with any of the suspects they sprayed.

Eight officers stated that they would have had to use their batons if the C.A.P. spray had not been available. One officer suggested that he may have had to use his gun if he did not have the spray, while one officer stated that the spray saved the suspects life because without it the only choice would have been to shoot the suspect. It should be noted that the suspect in this incident was intoxicated and high on drugs. And while the officer had to spray the suspect three times, the C.A.P. immobilized the suspect.

Two officers said that the spray had been effective in crowd control situations. When the spray was used only a few people were effected, but the rest of the crowd dispersed from a fear of being hit.

All twelve officers stated that they were very happy with the spray. It was described as another tool that helps do the job. Several officers stated that the spray also helps avoid injuries to themselves as well as suspects. This is a prominent issue in much of the literature about OC sprays. Orange County, Florida, sheriff's spokesman Sergeant Steve Jones stated "It's also valuable for the well-being of suspects, who otherwise would face more brutal methods. It's better than using a nightstick and breaking bones" (Leithauser, 1993, p. 1). In addition, publications by the International Associations of Chiefs of Police and the John Jay College of Criminal Justice make this assertion.

Some additional comments made by the officers should be noted by the Buffalo Police administration when reviewing the C.A.P. spray policy, and the training academy in order to update their Lesson Plan. First, one officer suggested that there be a form or some type of reporting procedure for supervisors when they feel that an officer should be retrained in the use of the spray. This is not meant as a punishment, but simply to retrain the officer in the safe use of the spray. Second, an officer who stated that he has read reports and articles on OC sprays suggested that officers be instructed on the safest position in a patrol car for a suspect who has been sprayed. In fact, avoiding positional asphyxia, which has not been linked to pepper sprays, is sound advice for all officers (This matter is discussed in the Medical Issues section).

Third, the safe use of come-alongs and compliance techniques on suspects who are handcuffed, but refuse to cooperate with an officers orders, can lower the number of spray incidents. However, as one officer mentioned, sometimes come-alongs are difficult to apply safely on a suspect who is cuffed in front, or when attempting to remove the

suspect from a patrol car. In these types of situations the spray may be the only method for gaining compliance.

Effectiveness

OC sprays have a growing track record of being an effective less-than-lethal force alternative; and while the effectiveness rates tend to be high, they still vary from department to department. The New Britain, Connecticut, police department has used OC spray in 360 cases over two-and-a-half years. "The OC has been effective ninety-five percent of the time" (Nowicki, 1993, p.25). Sergeant Van Pelt of the Akron, Ohio, police department states that their department has a ninety-nine percent effectiveness rating with Freeze + P (personal communication, 1994). Results from the Indianapolis police department are a bit lower. Lt. Robertson states that their Freeze+ P effectiveness rating is 85-89% (Personal communication, 1994). 37 officers from various British Columbia police departments tested OC spray for six months and established a 93% effectiveness rating in 104 uses (Park, 1992). A study by the International Association of Chiefs of Police evaluated 135 incidents in Baltimore County, Md. and found that "the spray subdued suspects about 96 percent of the time (Shaver, 1994, p. 1).

Success stories concerning OC sprays do include counterparts. The Department of Justice analyzed over 5000 national spray incidence and found that suspects were disabled "82 percent of the time, lower than the 90 percent effectiveness rating claimed by manufacturers" (Fimrite, 1994, p.A1). The Cincinnati police department has been averaging about 600 spray uses per year with an 85 percent effectiveness rating (personal communication with Inspector Muller, 1994). A recent study by the California Bureau of Criminal Identification and Information (1994) evaluated spray cases from 305 police departments and reported a 86% effectiveness rating.

It should be stated that these differences in effectiveness from department to department may have to do with the how the spray evaluations are calculated. For

example, Sergeant Van Pelt stated that their 99 percent rating included both those suspects who were completely immobilized and those upon which the spray had a minimal effect. As long as the spray had enough impact on the suspect to limit his abilities to resist, the spray was considered effective.

The reasons that OC spray is ineffective, or has only a minimal effect, seem to vary. "Police officers and manufacturers agree that pepper spray is sometimes ineffective against people under the influence of drugs or alcohol" (Fimrite, 1994, p.A1). This was a continuous response from the Buffalo police officers who were asked about the Freeze + P: C.A.P. just doesn't work on someone who's on crack. While this statement seems excessive, it is not entirely inaccurate. A random sample of Buffalo spray incidents (60 of 535 for the first six months of 1994) shows that Buffalo's spray immobilized 64.2% of the suspects under the influence of drugs. 28.5% of the time the spray had minimal effect, with a 7.1% escalation in the confrontation (Buffalo's spray report does not ask what type of drug a suspect was on so it is impossible to determine if the spray was more effective on one drug and not another).

The ineffectiveness of OC spray is also thought to occur as a result of a suspects state of mind. The above mentioned I.A.C.P. report "found that in highly agitated, very violent individuals, the pepper spray was either ineffective or less that fully effective" (Shaver, 1994 p. 1). Truncale and Messina state that there is nothing stronger than the human will to accomplish a specific goal (1994, p.47). In addition, they state that "it was found that persons with an offensive mind-set could accomplish a short-term goal 90 percent of the time" (p.48). This goal-directed mind-set is one of the possible factors that may allow a suspect to overcome the effects of OC spray.

There are other factors, seemingly innocuous, that may impact the effects of the spray. These are mentioned simply to illustrate the unknown variables that can limit the reliability of the spray so officers are aware of the possible limitations and can prepare to take alternative measures to deal with a violent suspect.

The first involves soft contact lenses. A study of officers wearing soft contact lenses during exposure to CS gas resulted in very little physical impact. “The authors concluded that wearing soft contact lenses during exposure to CS gas protects eye health and improves performance” (Military Medicine, 1985). Glasses also seem to lower the impact of OC sprays but there is little research in this area. A third variable involves fake eyes. An incident in Buffalo involved a suspect upon which “the spray had very little effect and the defendant had to be forcibly subdued”. The fact that the suspect was under the influence of crack and alcohol may have had more of an impact on the sprays effect, but the glass eye effect should not be completely discounted.

Recommendations

(1) During training officers should be strongly advised that pepper spray is not 100% effective in all situations. (This point is suggested because it is not mentioned in the Buffalo C.A.P. Training Lesson Plan).

(2) Cognizance of C.A.P. limitations should be combined with encouragement to continue practicing other self defense techniques (Baton, come-along, calling for back-up).

Effectiveness of Buffalo P.D. C.A.P. Spray

The following results were derived from a random sample of spray incidents for the first six months of 1994. 60 cases were selected out of 535. It should be remembered that exact calculations for the entire Buffalo P.D. C.A.P. spray history would be an extensive undertaking (over 1000 sprays) but not impossible.

Of the 60 selected cases 35 (58.3%) involved alcohol and 15 (25%) involved some form of drug influence.

Overall, 44 (73.3%) of the spray cases resulted in the immobilization of the suspect regardless of whether the suspect was sober or under the influence of drugs or alcohol. Of the 44 persons immobilization, 26 (59%) were influenced by alcohol and 10 (22%) were influenced by drugs.

The spray had a minimal effect in 14 (23.3%) of the 60 cases, with 7 (50%) influenced by alcohol and 4 (28.5%) influenced by drugs.

In only 3.3% (2) of the sample spray incidents did the C.A.P. spray escalate the confrontation.

Calculations were also made on spray effectiveness based upon the number of spray bursts and distance from a suspect. These figures do not take into consideration alcohol or drug influence.

(Results may not total 100% because of the two cases in which the confrontation was escalated.)

When a suspect is < 5 feet away from an officer the spray immobilizes 75% of the time, and has a minimal effect 25% of the time.

When a suspect is ≥ 5 feet from an officer the spray immobilizes 66.6% of the time, and has minimal effect 33.3% of the time.

At distances of 8 feet or more Freeze + P immobilizes and has a minimal effect 71.4% and 28.5% respectively.

Officers who used one burst of Freeze + P totalled 34 out of the 60 sample cases. Single bursts immobilized 82.3% (28) of the suspects regardless of distance, alcohol, or drug influence. 17.6% (6) of the suspects received a minimal effect from the spray.

Officers who used two or fewer spray bursts immobilized 80.9% (38) of the defendants. 19.1% (9) of the suspects suffered minimal effects after two or less bursts.

Those sample cases where the suspect was sprayed three or more times showed interesting results. Of the ten times when officers used the spray three times or more, half of the suspects were immobilized and half suffered minimal effects. If we look closely at these ten cases we find that 60% were under the influence of alcohol, drugs, or both. Two basic conclusions can be suggested from this finding.

(1) Drugs and alcohol can limit the effectiveness of OC sprays.

(2) If a suspect is not immobilized after two bursts of spray an officer may have to rely on other control alternatives.

The overall results of the random sample suggest that C.A.P. spray should be used with the awareness that it has its limits. This is particularly true because it is as yet unclear how functional a suspect remains when the spray has a "minimal effect". If "minimal effect" means that a suspect is disabled enough to allow an officer to gain control of him without a struggle, than immobilization and minimal effects combine to achieve a 96.6% effectiveness rating. However, when the safety of officers and the public are involved, we should not assume that the spray will be 96.6% reliable. A closer examination of "minimal effects" is necessary if effectiveness ratings are to be considered accurate.

Medical **Issues**

Because OC sprays are a relatively new tool for police officers, questions concerning health risks have evolved. These unknown health risks have caused the Florida State Police to drop the mandatory spray requirement for those officers who wish to carry OC spray. However, this change in policy is not the result of any solid

medical research. According to F.S.P. Captain Howes, (personal communication, 1994) the officers simply feel that the pepper spray products have not been tested enough to know all the health problems associated with its use.

In spite of this concern for possible health risks, research has found no long-term health problems associated with OC sprays. An F.B.I. study consulted two research chemists and an analytical chemist who "advised that OC is derived from the cayenne pepper plant which is used in foodstuffs and pharmaceutical products. They could not foresee any long-term health risks with the use of OC as a chemical agent" (Weaver & Jett, 1989, p.1). In a two year study done by the F.B.I.'s Firearms Training Unit and the U.S. Army Chemical Research and Development Center, they found no long-term health problems connected to the use of OC spray on 899 subjects. "The C.R.D.C. further reported that neither mutagenic or carcinogenic effects were found on laboratory animals exposed to OC" (Onnen, 1993, p.2). Dr. Roy Alson of the Bowman-Gray School of Medicine in Winston-Salem has stated that "he has not seen any critical medical reports about possible health problems caused by pepper spray" (Crime Control Digest, 1993, p.3). Finally, R.C.M.P. officers in Canada will continue to allow themselves to be sprayed as a part of their OC training since Health and Welfare Canada has evaluated pepper spray and "found it to be safe" (Pemberton, 1994).

The only research that suggests that OC spray could be a possible health hazard has come from Occupational Health Services, a private research facility contracted by the Kansas City Police Department. Their research stated

That the use of OC on persons with respiratory problems could, in rare instances, cause death. However, they contended that such an occurrence is statistically improbable, noting that none of the 899 F.B.I. subjects (a percentage of whom probably had, like the general population, pre-existing respiratory ailments) reported any adverse reactions (Onnen, 1993, p.2).

The "statistical Improbability" of a death resulting from OC spray is manifest since only one, out of 30 in-custody deaths in which OC has been associated, has been linked to OC; and this linkage has been challenged (Clark, 1993).

The 30 incidents in which a death occurred after OC spray was used (between August 1990 and December 1993) were studied by the International Association of Chiefs of Police. The review resolved that "OC was not a factor in any of the deaths and that something else caused the suspect to die" (Granfield, Onnen, & Petty, 1994, p.2). The other causes were determined to be positional asphyxia in which "body position interferes with respiration resulting in asphyxia" (p.3); cocaine abuse and toxicity; cocaine induces excited delirium; and neuroleptic malignant syndrome, which is similar to delirium and "generally occurs in psychiatric patients who are taking antipsychotic medication" (p.4). The study concludes that "sudden custody deaths can occur at any time for a variety of reasons. Any law enforcement agency may experience a sudden custody death, regardless of OC involvement" (p.4).

It is clear that the available research suggests that OC spray is a safe, less-than-lethal alternative, that has no known long-term health risks. Nevertheless, because OC is still fairly new in police work, and there may be some health areas in which OC has not been fully studied and evaluated, the following recommendations are made:

(1) During OC training, inform officers that a suspect who has been sprayed must be continually monitored until decontamination is complete.

(2) Due to the adverse health effects that cocaine can have on a person, continual monitoring is particularly important if a defendant who has been sprayed is suspected of being under the influence of cocaine.

Complaints and **Lawsuits**

One of the suggested benefits of using OC sprays is that it will result in a reduction of use of force complaints. When there are fewer allegations of police

brutality there are fewer lawsuits. A March 1994 National Institute of Justice report states “police departments that use OC aerosols report little, if any, litigation initiated by the use of pepper spray on combative arrestee” (p.5). For example, the New Britain, Connecticut, police department has had only one excessive force complaint as a result of the OC spray, and this complaint was unfounded. According to Inspector Muller of the Cincinnati police department, that organization has received less that 12 use of force complaints from its OC use. In Kansas City there have been less that 10 use of force complaints.

Three police departments that are currently using Freeze +P (Akron, Ohio; Indianapolis Police; Indiana State Police) report no internal complaints resulting from the spray use; and only one lawsuit in which the spray was later found to have no relationship.

According the Buffalo police Internal Affairs Division, six use of force complaints have been filed (Jan.- June, 1994) in which C.A.P. spray is involved. Two of these cases are still open and four received a disposition of not sustained. Mike Risman of the City of Buffalo Corporation Counsel states that there have been no lawsuits filed as a result, or with the involvement, of C.A.P. spray. He also states that the use of C.A.P. spray is a positive thing that should help reduce the number of use of force complaints over time.

If C.A.P. spray results in less reliance on batons, empty-hand defensive tactics, and flashlights to control a person than there should be a corresponding reduction in the overall number of use of force complaints being filed with Internal Affairs. In Buffalo this is not the case. Complaints filed from January through June of 1994 increased markedly over the first six months of 1993 and 1992.

	Force Complaints/First 6 Months	Total Force Complaints
1992	23	53
1993	19	43
1994	31	N/A

By the middle of July, 1994, six additional use of force complaints have been filed bringing the current total for 1994 to 37, only six below the total for 1993. The reason for this increase is unknown. A close examination of the use of force complaint cases may shed light on this situation; however, that is outside the realm of this report.

Training

Training in the use of C.A.P. sprays is no different than any other area of law enforcement. Without the proper training an officer can put himself, citizens, and other officers in danger. Inadequate training also opens up the department to legal action. The Buffalo Police training program appears to be a model approach from which other departments can take a lesson (personal communication with J. Pervis).

A comparison of Buffalo's C.A.P. training program with other departments supports this statement. In the F.B.I. new agents who pass through the training academy receive "a four hour block of instruction regarding chemical agents" (Weaver & Jett, 1989, p.6). In addition, agents are exposed to chemical agents in an enclosed room. In Concord, N.C., officers who wish to carry OC spray must themselves be sprayed during their four hour training class (Clark, 1993). Officers in Cincinnati, and those with the Oregon State Police, must also go through a four hour training class, with a mandatory spray policy in Cincinnati. A three hour National Law Enforcement Training Center Certified Course in the use of OC spray is used by the Kansas City Police Department

On a more local level the Erie County Central Police Training Facility gives a seven hour training class on OC sprays to all new recruits of Erie County police agencies. Individual department policies determine whether officers must undergo exposure to the spray. This training program is an improvement from the original two hour synopsis used by the Amherst Police Department.

A review of departments that use Freeze + P also suggests that Buffalo's C.A.P. training is extensive. The Akron, Ohio, Police Department has a four hour training class with no mandatory spray requirement. The Indianapolis Police Department has a two hour training block for incumbent officers with two follow-up bulletins, while new officers receive all aspects of OC training (defensive tactics, report writing, etc.) during their academy training. Only the new officers are exposed to the spray. The Indiana State Police have two hours of initial OC training, and receive additional instruction on defensive tactics and chemical agents during two of their in-service training days each year. Yet, the number of hours in C.A.P. training is not as important as what is included during that training.

Various writers and researchers have made suggestions and recommendations regarding training, almost all of which have been encompassed in the training program of the Buffalo Police Department. Jami Onnen (1993) in an Executive Brief for the International Association of Chiefs of Police, has stated that:

> proper training should be comprehensive, going beyond the technical aspects of the munitions (such as symptomatic effects, first-aid, and documentation protocols). Legal and tactical issues must also be examined. Tactical issues include application techniques, verbal commands, and proper physical positioning (p.3).

Without exception each of these concerns are covered in some way in the Buffalo Police Lesson Plan. Emergency care procedures are expressly covered and advise officers to seek medical care if any doubt exists in a suspect condition.

The instructors who teach C.A.P. spray classes to Buffalo police officers have each received 36 hours of instructor training themselves. This training was provided by the manufacturer of Freeze + P. A video tape was made of this instructor training program to be used as a reference source for officers training, and as an aid for future instructor training.

Application methods discusses by Bert DuVernay (1993) are also a part of Buffalo's training. Methods such as "a spray technique that dispenses an optimum amount of chemical, proper verbal directions, proper movement to keep a tactical advantage" (p.5) are specifically addressed in Buffalo's lesson plan.

When looking at the use of force continuum, the Buffalo C.A.P. policy has assigned Freeze + P to an intermediate level. Use is warranted for in a wide range of situations. This placement is in line with what is suggested by a National Institute of Justice report (March, 1994), and a training manual on OC sprays developed by R.E.B. Security Training, Inc. (A.C.L.U., 1993).

Requiring an officer to be exposed to the type of OC that he will carry is a recommendation of Roland Ouellette, a retired Connecticut State Police Lieutenant who developed the Oleoresin Capsicum Aerosol Training program for law enforcement. Each of his reasons for requiring an officer to be sprayed (to develop an understanding of the spray; compassion for those sprayed; instilling confidence in the product) are incorporated in the Buffalo training program.

Documentation of spray incidents are also a strongly recommended part of a departments training and spray policy. Nowicki (1993) and a National Institute of Justice report (1994) support this point as an avenue toward avoiding and defending against lawsuits. Buffalo's current Chemical Agent Use Report is adequate, yet some improvements can be made that will insure proper and accurate documentation for use in court as well as future studies and evaluations.

Recommendations **for Trainina and Documentation**

(1) Clarification of Lesson Plan part Ill, and department policy section regarding use. Both sections state that C.A.P. can be used after a lawful arrest. By including the declaration "or grounds for arrest" in these areas the policy receives clarification on the C.A.P. spray utility for crowd control or other instances when an arrest is impossible or impractical.

(2) Training should emphasize verbal commands during all phases of an encounter, if practical. "Commands given before the actual use of force are essential warnings that attempt to coax cooperation from the subject" and "establish use of the lower force level and reluctance to escalate the level of force" (N.I.J. 1994, p.4). (This does not necessarily include warning the suspect that the officer is about to use the spray). Officers must exhaust all lower levels of force in order to avoid possible constitutional violations from the excessive use of force.

(3) Officers should document the types of verbal warnings used in an attempt to de-escalate a situation.

(4) Officers should document how they reduced the force used as the suspects resistance declined.

(5) Officers should avoid drawing both the spray canister and their service weapon simultaneously. Bert DuVernay (1993) provides three reasons why this should be avoided. First, under high stress situations, brain messages can be sent to both hands resulting in an officer shooting when he meant to spray. Second, empty-hand tactics, when dictated, are ineffective if one hand is occupied with an inappropriate weapon. Third, if the officer finds it necessary to use his gun, the two handed shooting method is most effective.

(6) If a suspect who is handcuffed and in custody refuses to cooperate, an officer should reissue any commands previously given, than move to acceptable pain/compliance techniques if they can be applied safely. If the C.A.P. spray is then used the lower levels of force attempted should be documented.

(7) Officers should be trained to document the contamination of any bystanders and the decontamination process used by those accidentally sprayed as well as the suspect. This will assist the officer in accurately recalling events if so required.

(8) Race should be documented.

(9) Several of the above documentation suggestions can be modified into the Chemical Agent Use Report by adding fields to the report which would require answers. This would aid officers who may inadvertently forget to document these occurrences.

Discriminatory Use

One fear of OC spray is that it will be used in a discriminatory fashion by officers that know the effects of the chemical agent: non-marking; less-than-lethal; results which last for a short period of time. In a report by the American Civil Liberties Union of Southern California (1993), the authors state that "LAPD officers appear to use OC on African-Americans with a disproportionate frequency, but there is no finally conclusive evidence of racial bias" (p.23). The statistics were inconclusive because OC field tests were done in a few police districts with higher African-American populations. In addition, it is still unclear whether the fear of OC spray abuse should be in the area of racial bias, or from those few rogue officers who will use the spray as they see fit.

Determining if a department's personnel are using OC in a discriminatory fashion is not a simple task. What do you compare the number of spray incidents to in order to make an accurate evaluation? For the purposes of the Buffalo Police Department, a random sample of spray cases will be compared to the frequency of arrests for blacks and whites in 1992 and 1993.

The random sample included 45 spray cases from the first six months of 1994; however, only 39 are used to calculate the spray frequency because the race in six cases could not be determined.

Of the 39 spray incidents 25 subjects were black and 14 were white (64.1% and 35.8% respectively). When these numbers are compared to the total number of arrests for 1992 and 1993 the results are as follows:

	% of spray cases/1994	% arrests/1993	% arrests/1992
Black	64.1	63.8	64.4
White	35.9	"35.6	"35.1

* Totals do not equal 100% because some of those arrested were classified as "other".

The percentage of spray incidents by race for the first six months of 1994 is almost identical to the percentage of arrests by race for both 1992 and 1993. Although this does not prove that the spray is not being used in a discriminatory fashion, it shows that C.A.P. spray use is currently in line with how officers are arresting suspects. The most accurate analysis of this subject would be to evaluate all the spray cases in Buffalo, but like effectiveness estimates, this would be an extensive undertaking.

The available information suggests that OC sprays can be a relatively safe and effective less-than-lethal method for controlling a subject. Research has shown that health hazards don't appear to be a problem, and effectiveness ratings are close to those proposed by manufacturers. As a reminder, it is unclear how "minimal effect" fits into the effectiveness rating. If "minimal effect" allows an officer the ability to gain control over a suspect without risk of injury to himself, than the spray should be considered effective. Anything less should be seen as an insufficient performance of the product and rated as "ineffective". Additional research in this areas is necessary.

The results of the survey of Buffalo police officers shows that most enjoy the product very much and consider it an effective tool. Also, the officers are already aware that C.A.P. spray does have its limitations, particularly on suspects under the influence of cocaine. Since most of this knowledge has been learned with first hand experience, training should emphasize this fact so new officers can avoid learning from trial and error.

The Buffalo C.A.P. Lesson Plan appears to be a comprehensive training program that covers all the issues and recommendations concerning OC sprays.

Although several new recommendations have been made, most of these proposed changes come from information that has recently been developed in the field. As new information is acquire by the training academy, bulletins and updates should be disseminated to assist those officers trained in the past so they can keep informed of the new information.

Notwithstanding all the positive information, because OC sprays are still fairly new in the field of law enforcement and not all of the health risks or effectiveness ratings may be known as yet, constant updating and monitoring of the incoming research information should be done. This is an obligation of the department and city if they desire to provide the finest and safest police service available.

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