

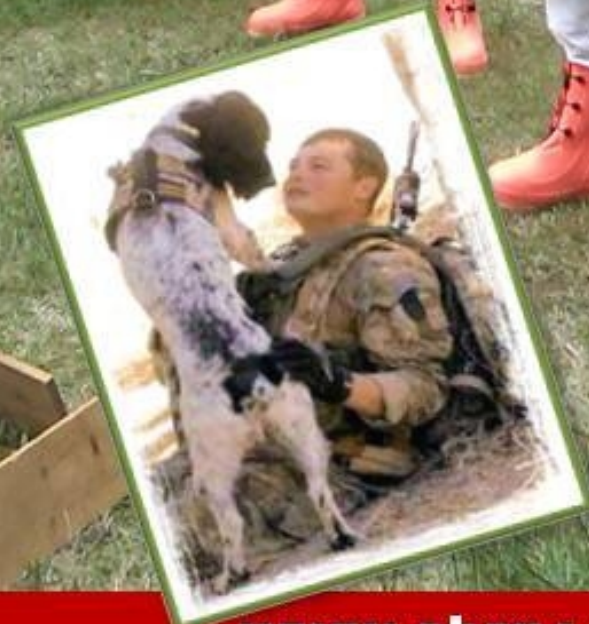
Syrian CWAs – Are they under control?

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Original Papers



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Clan Labs In The CBRNE Environment

By Marc Dugas

“Take a pinch of red phosphorous, a smidgen of ephedrine, a dash of iodine and a skosh of lye. Add some distilled water and simmer for a few hours and hope it doesn’t explode and kill you.”

Excerpt from **The Betty Cranker Cookbook**

Crystal meth is created by cooking the *ephedrine* or pseudoephedrine found in cold medicines or weight loss aids. The pills are crushed into powder, then blended to a steady boil with other solvents like starter fluid or Coleman fuel. This creates a bubbly, sudsy chemical reaction which can be strained and set aside to dry in the basement or living room.

The foaming white, crumbly residue can be smoked in a traditional crack pipe made from glass or ceramic (high in 3-5 minutes) -- or placed gently upon a small sheet of tinfoil, heated from below with a cigarette lighter and the vapors inhaled (high in 2-3 minutes). If the end product looks more like crystals than powder, they can be melted over a spoon, drawn into a syringe, and injected into your bloodstream (immediately high). If you just want to put it in your mouth and swallow, you have to wait fifteen minutes.

A single dose of meth lasts for six to eight hours. The identical portion of cocaine would get you high for maybe twenty minutes. Popular slang for meth includes ice, crystal, crank, also tina - a corruption of the word *sixteen*, based on the concept of one sixteenth of an ounce, the smallest amount required to get a decent high on.

Dr. Mary Holley, obstetrician and chairperson of Mothers Against Methamphetamine, informed the Associated Press that one initial hit of meth is the equivalent of ten orgasms all on top of each other, each lasting for 30 minutes to an hour, with a feeling of arousal that lasts for another day and a half. She is quick to confess that the effect doesn't last long: "After you've been using about six months or so, you can't have sex unless you're high. After you have been using it a little bit longer you can't have sex even when you're high. Nothing happens."



Tweaker Couture

In the period from 2008 to 2009, there were overall reductions in coca, cannabis, and poppy production worldwide, according to the United Nations yearly drug report. But there are startling numbers showing during the same period, amphetamine type stimulants (ATS) were experiencing

enormous growth.

ATS manufacture is highly attractive because of its low cost and high profitability, a \$63 billion dollar market for about 500 metric tons of product worldwide, annually. Interdiction is difficult as chemical precursors are produced in every industrialized country and readily smuggled across borders, and personal consumption is way up.

To supply North American markets, 80% of ATS is created in large, professional laboratories in Central and South America, and southern California. The precursors are shipped there and manufactured into usable, high grade product for personal consumption. The 20% balance of ATS is created in household kitchens and bathrooms, vehicles, garages, hotels, rental apartments and rural outbuildings in the US and Canada.



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It is these “Bevis and Butthead” labs that present the greatest danger to local CBRNE teams, because even though the larger labs make the most product, they are much safer.

Safety Considerations For CBRNE Teams

Creating methamphetamine is a dangerous process. Small labs account for more fires, explosions, hazardous waste



dumping, and public endangerment than large labs, and so are of greater concern to CBRNE personnel. Here are the main concerns:

1) IMPROVISED EXPLOSIVE DEVICES

- In a document readily available online called “Secrets of Methamphetamine Production” by Uncle Fester, we find the following paragraph:

A nice addition to any underground laboratory is a self-

destruct device. This consists of a few sticks of dynamite armed with a blasting cap, held inside an easily opened metal can. The purpose of the metal can is to prevent small accidental fires from initiating the self-destruct sequence. If Johnny Law pays an uninvited visit to his lab, the underground chemist lights the fuse and dives out the window. The resulting blast will shatter all the glass chemical containers and set the chemicals on fire. This fire will destroy all the evidence.

I.E.D.'s must be a primary consideration, especially for the first responder who stumbles on a clan lab while attending on an unrelated matter. Lab operators don't care about collateral damage. Get the hell out. Bomb Disposal Units are mandatory before raiding or exploring a known clan lab.

2) CHEMICAL HAZARDS - The easiest way to detect clan labs are when they explode, which happens frequently, depending on how much meth the operator uses himself. Because smaller labs don't have access to pharmaceutical grade chemical precursors, they often have to make their own.

Among the precursors are ephedrine, pseudoephedrine, phenylpropanolamine, red phosphorous, iodine, hydrochloric acid, anhydrous ether, hydroiodic acid, anhydrous ammonia, acetone, benzene, formic acid, hydrogen peroxide, methanol, N-methylformamide, and toluene. By themselves not all are toxic, but they are often combined or used to create precursors which are then more dangerous.

Anhydrous ether is very flammable, has a powerful odor, and evaporates so quickly that an explosive cloud of vapor can fill a room, requiring only a spark from a cooler or burner to set it off. Phenyl acetic acid is a common precursor, smells like cat urine, and is hard to ignore as the stench gets into everything.

Crystal meth can be hidden and stored by dissolving it in grain alcohol, and later evaporated for use again. Be suspicious of large quantities of booze in the liquor cabinet at a lab.

One variant of the ephedrine reduction method for producing methamphetamines is to combine iron sulfide and hydrochloric acid to produce hydrogen sulfide, the Japanese suicide gas. The gas is then bubbled into a suspension of iodine in water to produce hydroiodic acid. Dumping waste iron sulfide and hydrochloric acid into sewers can increase the risk of hydrogen sulfide poisoning to unprotected personnel.

Occasionally it is necessary to clear out entire buildings of tenants while cleanup is performed over a period of weeks to months. Each pound of ATS produced creates about 5-6 pounds of hazardous waste to be disposed of, and costs thousands to tens of thousands of dollars per cleanup.





Precursors

A Fire pumper with charged lines should be on standby. PPE must consist of splash protection like a Tychem F suit, boots, gloves, and an SCBA. A RECCE Team would likely enter initially with Level A or B protection until air quality and explosive gas limits are determined with a photo ionization detector, and I.E.D. risk is mitigated. The Toronto Police have their own fully equipped clan lab teams, who enter on their own for preservation of the evidence chain, so Fire and EMS services usually remain on standby until this phase is complete.

3) MEDICAL RISK FOR METH USERS –

Lab operators may end up using their own product, and will typically get careless and spill and blow up their own labs. “Meth Mouth” (loss of teeth), skin burns, skin and eye irritations, and pulmonary edema are common complaints from operators. High blood concentrations of heavy metals have been found in lab operators. Users are a risk to

themselves and others when tweaking, and they can be awake and malnourished for many days, clawing at their skin, and getting crankier by the minute until they meet up with a friendly paramedic or police officer.

At the point of arrest and/or transport to hospital, users can be in danger from excited delirium, resulting in hypertension, high fever, tachycardia, and hyperventilation. If handled roughly or restrained in the prone position, meth users may die unexpectedly from positional asphyxia. Consider sedation, and expect to patch for higher than normal doses required to overcome their condition. When confronting a tweaker:

- **Keep your distance.** Coming too close can be perceived as threatening.
- **No bright lights.** The tweaker is paranoid and bright lights may cause them to react violently.
- **Slow your speech, lower your voice.**
- **Slow your movements.** The tweaker is paranoid and may misunderstand your movements.
- **Keep your hands visible,** or they may feel threatened and become violent.
- **Keep the tweaker talking.** A tweaker who falls silent can be extremely dangerous. Silence often means that his paranoid thoughts have taken over reality, and anyone present can become part of the tweaker's paranoid delusions.



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4) **STRUCTURAL HAZARDS** – Wearing PPE makes it difficult to see hazards, including booby traps, IED's, holes in floor or trip hazards.



5) **ELECTRICAL HAZARDS** - Non-code wiring, by-passed electrical panels and overloaded circuits create an electrocution risk for operators. The excess electrical usage caused by these hazards often reveals the location of grow ops and meth labs.



6) **ENVIRONMENTAL HAZARDS** – toxic mold from grow operations is prevalent due to high humidity. Creating precursors to create meth coats the walls with red phosphorus and other toxic chemicals, and can completely destroy the interior structure of a building.





7) CHILD ENDANGERMENT

Many jurisdictions are now finding that children are commonly exposed to the hazards of clandestine methamphetamine labs. In 2003, police found more than 3,000 children at methamphetamine lab sites. Young children frequently put their hands in their mouths, have higher metabolic and respiratory rates than adults, and have developing central nervous systems, all leaving them vulnerable to harm from inhaling, absorbing, or ingesting toxins from chemicals.

About two-thirds of children found at labs seized by police tested positive for toxic levels of chemicals in their bodies. Others suffer burns to their lungs or skin from chemicals or fire. Some have died in explosions and fires. Many are badly neglected or abused by parents indulging in drug abuse. (Senior citizens whose caretakers are lab operators are similarly vulnerable. Pets, including guard dogs, can also be harmed.) When police agencies start targeting labs for investigation and seizure, social service agencies and family courts should be prepared for increased workloads, as well.

Summary

There are many clan lab drugs and grow operations, all equally dangerous. Whatever type of lab you find, consider the danger to yourself and the public to be high until the scene is rendered safe. Buildings may need to be evacuated, Fire department pumpers should be ready to respond. I.E.D.'s must be checked for and disabled by bomb disposal teams, HAZMAT must be prioritized for detection and disposal, and patients must be decontaminated, assessed, treated, and transported by EMS, all the while preserving evidence for FIS. Social services may become involved in long term plans for relocating tenants and children, and mold or chemical remediation of a building will likely take place. All in all, a long and costly process for a quick high and a short hard on. ■

THREATWATCH

Bimonthly CBRNE Newsletter

Marc Dugas, Paramedic, CBRNE Technician

Contact: Threatwatchtoronto@gmail.com





EDITOR'S COMMENT: A highly recommended Newsletter from Canada!

Toronto CBRNE Newsletter

Volume 3, Issue # 5, 2012

THREATWATCH

Little White Lies



"The US is heading for economic Armageddon! Israel is going to bomb Iran back to the Stone Age! Energy and food supplies will implode! A New World Order is set to rule us all with an iron fist! Gas is going to \$100 a litre! Cats and dogs will be living together in sin!"

It's fun predicting the future, especially since it requires absolutely no proof, and there are no consequences to the purveyors of such bull. As an adult, you can get away with putting things in print that would get your mouth rinsed out with soap as a child, or a board

across the backside (at least in my house).

But the media has completely different motives. Fear sells, especially on TV. Switch to one channel, you have Muslims at war with the infidel over a film, another has a story on Lindsay Lohan's latest drug and alcohol fuelled rages, another has swamp loggers, dumpster divers, and white trash tomb raiders, dramatizing their useless and mediocre lives with a camera and a rock and roll soundtrack.

Even more entertaining are the lies and recriminations being swapped by the Romney and Obama camps. It's no wonder the world wallows in ignorance and apathy.

A current lie being perpetrated throughout the media is that the bombing of the U.S. embassy in Libya and the death of 4 Americans, including the ambassador to Libya, Chris

Stevens, was caused by the propaganda film "The Innocence Of Muslims".

The film release may have been a trigger or signal, and nothing more, to an event that was well into the planning stage, probably as a September 11 anniversary event.

The real problem is foreign intervention and interference in Muslim countries for decades, including wars, gun running, extraordinary rendition, assassination, legalized torture, and the collateral murder of civilians with Predator drones to take out a single terrorist.

Muslim rage has been simmering for years, and the entire Arab Spring revolt is a sign of what Western intervention has reaped. If we don't make peace with these people soon and another Middle East war breaks out, it's safe to say we won't have to lie about the future of terrorism.

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What to expect



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- Krokodil, World's Worst Street Drug



More than Sarin and VX for Aum Shinrikyo's Chemical Weapons: Revelation by Dr. Tomomasa Nakagawa who is in Deathrow

By Dr. Anthony T. Tu

On December 14, 2011 I interviewed Dr. Tomomasa Nakagawa (colored photo), who is on death row, for the first time and I obtained valuable information about the chemical weapons program of Aum Shinrikyo. In early May 2012, Dr. Nakagawa's lawyer, Mr. Goto, told me that Dr. Nakagawa requested to talk to me again. I agreed to meet him on the morning of June 11, 2012. His lawyer, Mr. Goto, made a formal request to the director of the Tokyo Detention Center for permission to meet with Dr. Nakagawa, on my behalf. Again, Dr. Danzig of Washington DC supported the interview. Two weeks after the formal request, the interview was granted for June 11, 2012. Again I was granted 30 minutes instead of the usual time of 10 minutes for interviewing death row inmates (Photo 1.)



Since the interview of June 11 was initiated by Dr. Nakagawa, I refrained from asking too many questions and instead I listened to him talk. In the first interview on December 14, 2011, I took initiative to ask him a lot of questions in order for me to find the answers to many questions that I had. By interviewing him for the second time, I obtained a plethora of information

about Aum Shinrikyo's chemical and biological weapons program.

More than Sarin and VX in the Aum Shinrikyo's Arsenal

I was shocked to learn from Dr. Nakagawa that Aum Shinrikyo had more chemical weapons than anyone anticipated. They actually synthesized 20g of soman (GD), 20g of tabun (GA), and 20g of cyclosarin (G7) in April 1994. Mustard gas was made in a larger quantity, 200g, in December 1994. They planned to make phosgene but did not manufacture it. It is rather surprising that Aum Shinrikyo made a variety of chemical weapons. They did not use these chemical agents because of their relatively small quantities.

These chemical agents were not listed in the indictment of Aum Shinrikyo's senior members' trials. Why didn't the Japanese know about these deadly chemical agents? There are probably two reasons that account for this. One is the police investigation focused on the collection of the information related to Aum's criminal acts. If some chemical agents are not used then they remain outside of the police investigation. The second reason is attributed to the method of the Japanese Police investigation. In Japan, questioning of a criminal is conducted by the special inquiry office, who does not know any science or chemistry. Therefore, when it comes to the questions involving chemistry, the officer simply lets the criminals write the answers themselves. So the criminals did not have to answer if it was not asked.

Different Ways to Make Sarin

The Aum Shinrikyo made sarin mainly in the laboratory at the place called Kushivagalvaty prelab. Dr. Nakagawa called it Tsuchiya's lab because Tsuchiya was the main architect of sarin production. I will describe the three different ways that they made Sarin. Aum Shinrikyo made used 5 steps, and they modified the steps depending on the situation the sarin was to be used for.

A. Sarin Used for Matsumoto Terrorist Attack

The sarin used for the Matsumoto city attack was made from the second step omitting the first step. They purified the final sarin yield so that it was relatively pure when they used it in Matsumoto city on the night of June 27, 1994.



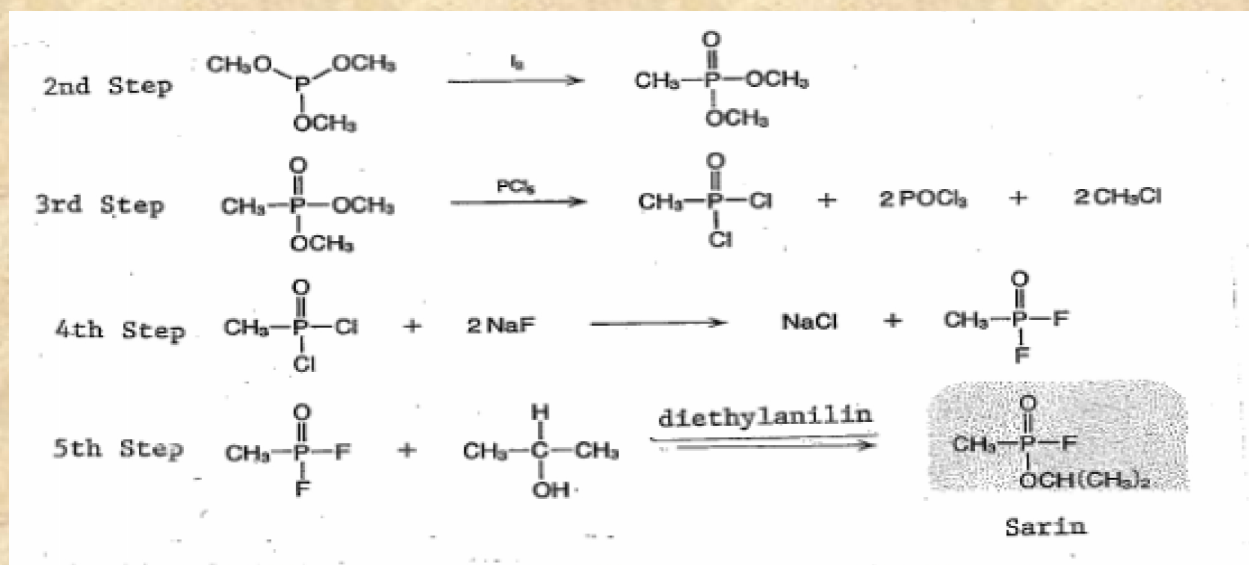


Fig. 1 Synthesis of sarin used in Matsumoto City on June 27, 1994. P(OCH₃)₃ was purchased from an open market

B. Tokyo Subway Attack

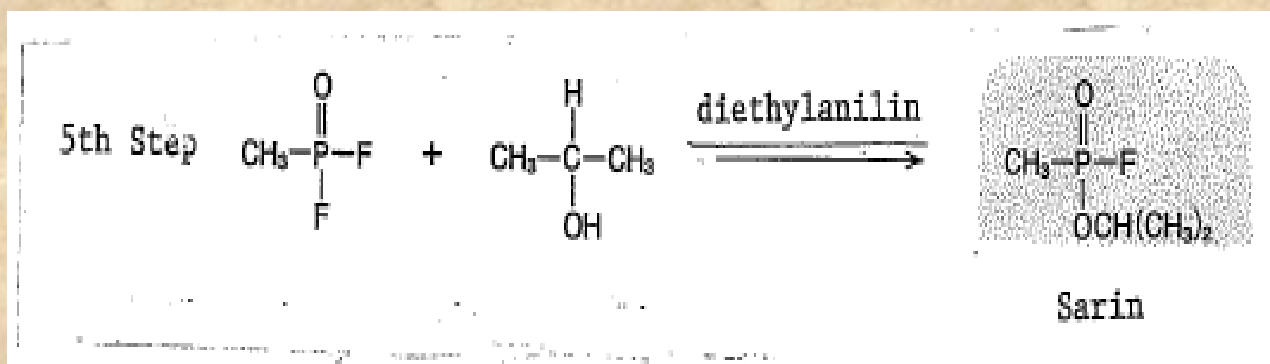


Fig.2 Sarin was made using the 5th step only for the use in the Tokyo Subway Attack

They had a large stock of difluoro methylphosphonic acid, so only the final step was used to make sarin overnight. Because they were pressed by time, they did not purify the final product and used it in the condition in which it was obtained without further purification as there was not enough time to do so. This was fortunate to the Japanese passengers in Tokyo's subways. If the sarin was purified, there would have been more casualties.

C. Sarin Manufacture at the 7th Satyan

This was a huge building and they tried to make 70 tons of sarin here (Photo 2.) Aum Shinrikyo gained experience of making sarin on a laboratory bench starting from the second step, by purchasing P(OCH₃)₃. But they never had experience making the first step, even at their lab.

Asahara was anxious to make sarin in large quantities at the 7th Satyan, and 70 tons was set as their goal. Because of their lack of experience, they failed many times to make P(OCH₃)₃ from PCl₃. This caused the leak of the first step reaction mixture to the outside twice. Japanese police were unable to detect the identity of noxious gases at that time because these gases evaporated, diffused and eventually disappeared from the air. By trial and error, they eventually succeeded to the third step. On January 1, 1995 Yomiuri Shinbun published in a newspaper that the Japanese Police detected organophosphates from the



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soil of Kamikuishiki, where the 7th Satyan was located. This news alerted Asahara and he ordered the Aum to stop the manufacture of sarin and they tried to destroy all the sarin and its precursors that they possessed. The process at the 7th Satyan is summarized below.

Where Did the Methylphosphonic Acid come from?

Japanese Police obtained the analytical method, from the author, of how to find methylphosphonic acid from me on September 21, 1994. In November 1994 there was a noxious gas leak from the 7th Satyan and the Japanese Police detected methylphosphonic acid. This finding was formally published by Japanese Police years later (ACS Symposium Series 745, pages 318-332, 1999).

By interviewing Dr. Nakagawa I found a great discrepancy between the published data by the Japanese Police and the actual manufacturing at the 7th Satyan, Aum's sarin plant. Japanese Police said they found methylphosphonic acid, thus they obtained evidence of sarin manufacturing at the 7th Satyan. But there was no sarin manufacture at the last (5th) step because they stopped at the 3rd step.

A. Aum's Explanation

The discovery of methylphosphonic acid (MPA) as the degradation product of sarin, reported by the Japanese Police, really puzzled the senior members of Aum Shinrikyo. How can one discover the sarin degradation product, MPA, without sarin produced? Aum Shinrikyo's members thought this was a fabrication by Japanese Police.

B. Nakagawa's Explanation

Matsumoto's sarin was made at Kushiti Galva prelab (Dr. Nakagawa called it Tsuchiya's lab). Look at photograph 2, Tsuchiya's lab and the 7th Satyan were next to each other. Dr. Nakagawa said the soil around Tsuchiya's lab was heavily contaminated by sarin and its precursor. So he thinks the MPA that the Japanese Police found came from Tsuchiya's lab, not the 7th Satyan.

C. Dr. Tu's Explanation

I agree with Dr. Nakagawa's explanation, but I also believe that there is another explanation in addition to Dr. Nakagawa's proposal (Fig.3.)

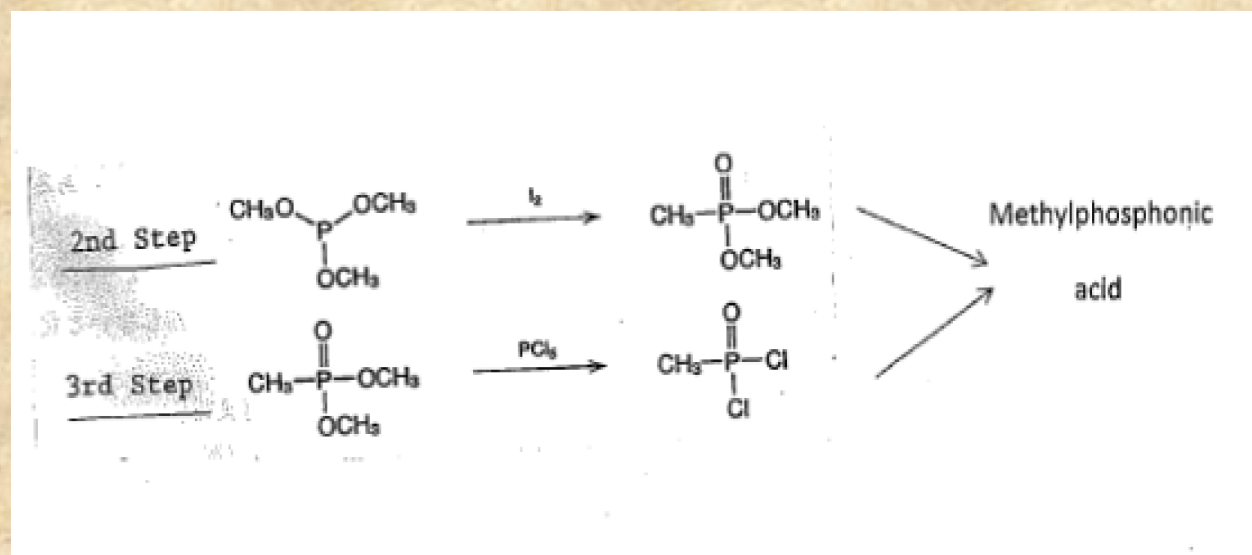


Fig.3 Possible pathway to methylphosphonic acid from the 7th Satyan



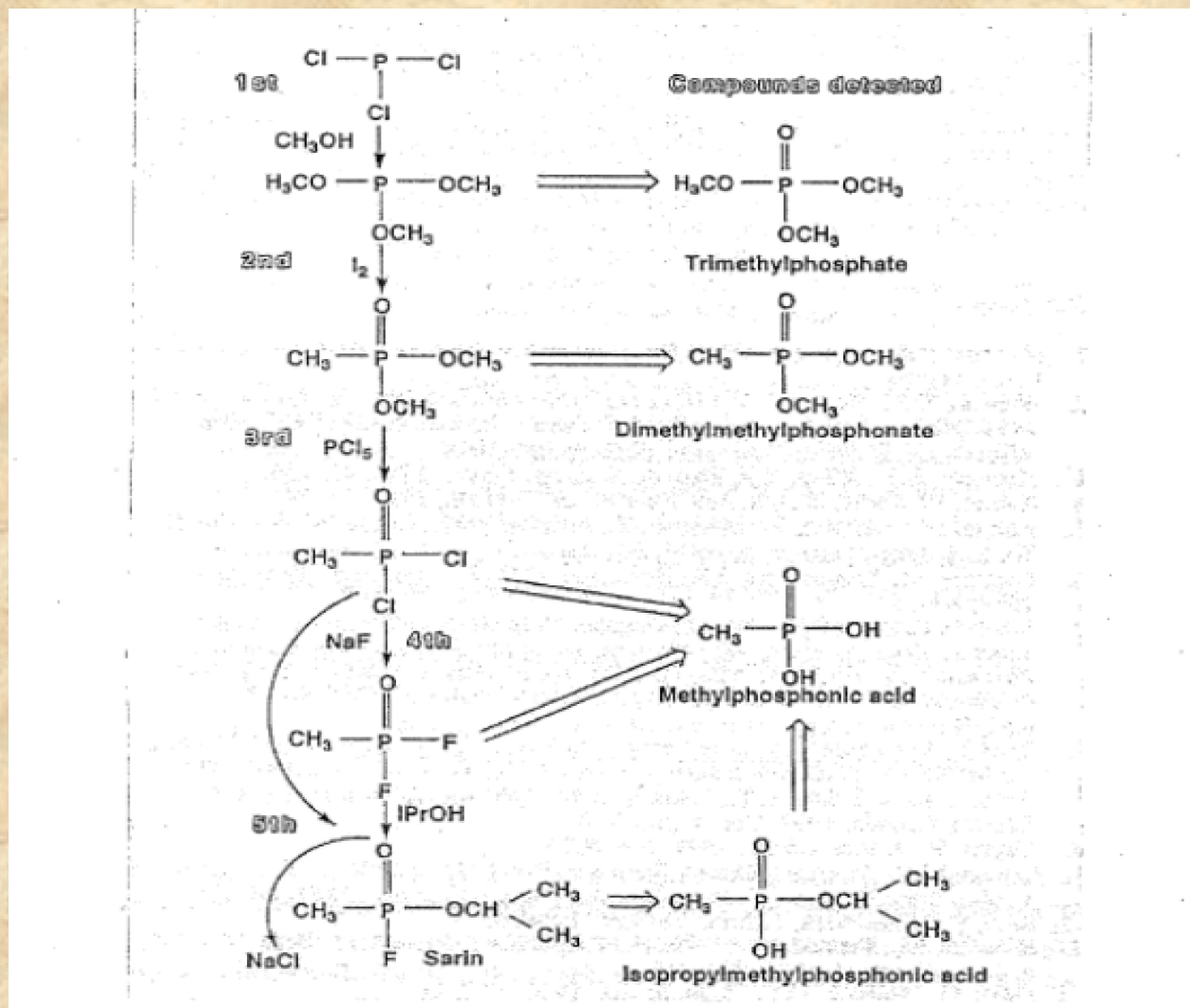


Fig. 4 Japanese Police’s summary as to the origin of methylphosphonic acid at the 7th Satyan. Quoted from pg. 331, ACS Symposium Series 745 (1999).

Since Japanese Police detected methylphosphonic acid from the soil around the 7th Satyan, it is very likely the degradation product must have come from contaminated soil from Tsuchiya’s laboratory. But as Japanese Police published the summary for the origin of methylphosphonic acid (Fig 4), they were wrong to say this is the mechanism for the formation of methylphosphonic acid at the 7th Satyan as there was no sarin at this plant. If they change the title to say, “Detection of methylphosphonic acid from the soil around the 7th Satyan and Tsuchiya’s laboratory” then the chart in Figure 4 could still be considered as correct.

Anthrax Production

It is well known that Aum Shinrikyo made a large quantity of anthrax and actually used it in Kamado, Tokyo but it was not effective. Nobody was hurt, people only complained about a foul odor. As to the ineffectiveness of Aum Shinrikyo’s anthrax, there have been several explanations. The most popular explanation was that Aum Shinrikyo selected a wrong strain; most likely they selected a nontoxic strain that is used for vaccines. Dr. Nakagawa said this was not entirely true. He said the biological program was administered by Dr. Seichi Endo, a virologist and bacteriologist. He used non-virulent strains from



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the beginning, but he had confidence that he could convert them to virulent strains by genetic engineering. Asahara had great hopes for anthrax weapons and he trusted in Dr. Endo. But after the actual use it was evident that Endo's anthrax was inactive and Asahara lost confidence in him. Dr. Nakagawa tested toxicity levels in various stages of the anthrax production. He said the results were not consistent and sometimes it was toxic and sometimes it was not. He clearly mentioned that all the biological weapons made by Dr. Endo were failures.

My Questions

As I had only 30 minutes for the interview, I had to find the remaining time to start asking my questions.

A. Mr. Sakamoto

Mr. Sakamoto was a lawyer who helped the dissatisfied members of Aum get out of the organization. This naturally caused Asahara to become angry and he eventually had Mr. Sakamoto and his family killed. I asked Dr. Nakagawa, "How did you inject the potassium chloride into Mr. Sakamoto and kill him?" He said, "the injection was not useful unless made through intravenous injection. We broke into Mr. Sakamoto's house with 6 people all together. I was the last one to enter the house. Everyone there expected me to inject him, so I hurriedly injected him. The cause of his death was not my injection as the court also agreed that the death of Mr. Sakamoto was due to suffocation." Usually people considered that the Matusmoto sarin attack was the Aum's first case of chemical weapon use. But, Dr. Nakagawa injecting potassium chloride itself should be considered as Aum Shinrikyo's first chemical terrorist attack.

B. Mr. Kariya's Incident

Aum Shinrikyo kidnapped and eventually killed Mr. Kariya, by over injecting an analgesic drug. His sister was a member of the cult but she defected and left the organization. Since all the members pledged to donate all their property to Aum Shinrikyo, the cult tried to find out where she was hiding so they could bring her back to the cult. Aum Shinrikyo needed her money. Since she pledged to donate the property before, the cult wanted her to come back to the organization. I asked Dr. Nakagawa, "how did you kill Mr. Kariya?" He immediately said, "this was not a murder case but it was a kidnapping case. I did not plan to kill him but it was an accidental death by over injection. The court did not charge me for the murder in this case." I knew Dr. Nakagawa burned Mr. Kariya's body by using a homemade microwave oven. But the story was too grotesque and ugly, so I refrained from asking further questions on how he burned Mr. Kariya's body.

C. About Fugitives, Ms. Naoko Kikuchi and Mr. Katsuya Takahashi

One June 8, 2012, one of the last two fugitives was finally arrested after running for 17 years. Ms. Kikuchi lived with a man named Mr. Hiroto Takahashi, who was not a member of Aum Shinrikyo, for several years. Hiroto Takahashi recently proposed for her to marry him. She said she could not do so because she was a fugitive. Hiroto Takahashi consulted with his brother. Because there was a 10 million yen (about \$120,000) reward for information on Ms. Kikuchi, Mr. Hiroto Takahashi's brother reported her to the police. Because of this information, Ms. Kikuchi and Mr. Hiroto Takahashi were arrested. The Japanese Police eventually arrested the last fugitive Mr. Katsuya Takahashi (not related to Mr. Hiroto Takahashi, based on information provided by Kikuchi). The brother of Mr. Hiroto Takahashi was not allowed to take the reward from the police, since he was a relative of the criminal. However, recently Japanese Police officially announced that they gave the reward to one person in connection with the arrest of Ms. Kikuchi. But the police authority did not reveal the identity of the person who received the reward. I asked Dr. Nakagawa, "did you know both Ms. Kikuchi and Mr. Katsuya Takahashi?" He said, "I knew both of them well. She was indicted for helping with sarin manufacturing, but she actually she was told to make deadly nerve gas VX. She was a low rank member so she did not know what she was making. She was confused as to what she was making." The day I met Dr. Nakagawa was June 11, 2012 and the next day I gave a lecture at Kyoto Sangyo University and I briefly mentioned this episode. A news reporter from Kyoto Shinbun (newspaper) happened to be there for my lecture. The next day the Kyoto Shinbun reported that Kikuchi was making VX and not sarin as generally believed. The Tokyo Metropolitan Police read this article and



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asked Dr. Nakagawa to testify about Kikuchi’s role in VX manufacturing. On June 25, the Japanese Police officially indicted Kikuchi for making VX, murder, and attempted murder.

Because of Kikuchi’s confession Japanese Police finally arrested the last fugitive, Mr. Katsuyo Takahashi. Dr. Nakagawa compared the two fugitives and said, “Mr. Takahashi’s crime was far more severe than that of Ms. Kikuchi.” As to Takahashi’s crimes, they were:

1. He escorted the members of Aum to the station that entered the subway and left sarin on the train, and broke the bag it was in. The members who did this (broke the bag) were sentenced to death while the people who escorted them were sentenced to life in prison.
2. Takahashi was involved in sending a bomb in a package to the Tokyo Metropolitan Government. The package exploded, and some people were injured.
3. Takahashi might have been involved in botulinum biological weapon manufacturing.

The second meeting with Dr. Nakagawa was only 30 minutes long, but I obtained much precious information hitherto unknown to the public and even to the Japanese Police. I thank Dr. Nakagawa for his frank comments.



Photo 1. Tokyo Detention Center in Kosuge, Japan where all 13 senior members of Aum Shinrikyo are locked up in deathrow.

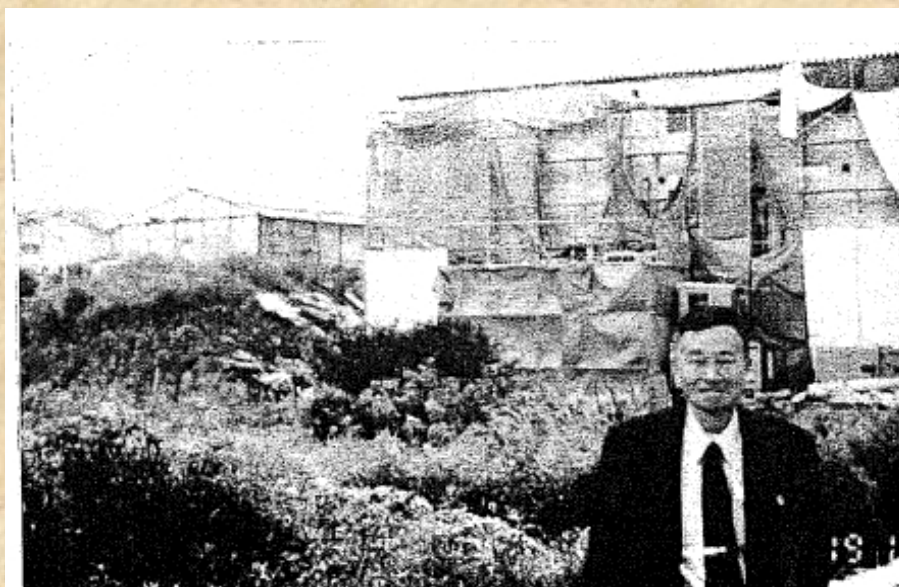


Photo 2. Aum’s Sarin manufacturing sites in Kamikuishiki.

Right: The 7th Satyan
Middle: Tsuchiya’s Lab (Kushitigalva Prelab)

Left: Prefab manufactured sarin for the Tokyo Subway Attack



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Prof Antony Tu is Emeritus Professor at Department of Biochemistry and Molecular Biology, Colorado State University, Fort Collins, CO and Visiting Professor, Juntendo University School of Medicine, Tokyo Japan

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Read also this very informative relevant report:

http://www.cnas.org/files/documents/publications/CNAS_AumShinrikyo_Danzig_1.pdf

