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From China to Panama, a Trail of Poisoned Medicine

By [WALT BOGDANICH](#) and [JAKE HOOKER](#)

The kidneys fail first. Then the central nervous system begins to misfire. Paralysis spreads, making breathing difficult, then often impossible without assistance. In the end, most victims die.

Many of them are children, poisoned at the hands of their unsuspecting parents.

The syrupy poison, diethylene glycol, is an indispensable part of the modern world, an industrial solvent and prime ingredient in some antifreeze.

It is also a killer. And the deaths, if not intentional, are often no accident.

Over the years, the poison has been loaded into all varieties of medicine — cough syrup, fever medication, injectable drugs — a result of counterfeiters who profit by substituting the sweet-tasting solvent for a safe, more expensive syrup, usually glycerin, commonly used in drugs, food, toothpaste and other products.

Toxic syrup has figured in at least eight mass poisonings around the world in the past two decades. Researchers estimate that thousands have died. In many cases, the precise origin of the poison has never been determined. But records and interviews show that in three of the last four cases it was made in China, a major source of counterfeit drugs.

[Panama](#) is the most recent victim. Last year, government officials there unwittingly mixed diethylene glycol into 260,000 bottles of cold medicine — with devastating results. Families have reported 365 deaths from the poison, 100 of which have been confirmed so far. With the onset of the rainy season, investigators are racing to exhume as many potential victims as possible before bodies decompose even more.

Panama's death toll leads directly to Chinese companies that made and exported the poison as 99.5 percent pure glycerin.

Forty-six barrels of the toxic syrup arrived via a poison pipeline stretching halfway around the world. Through shipping records and interviews with government officials, The New York Times traced this pipeline from the Panamanian port of Colón, back through trading companies in Barcelona, Spain, and Beijing, to its beginning near the Yangtze Delta in a place local people call "chemical country."

The counterfeit glycerin passed through three trading companies on three continents, yet not one of them tested the syrup to confirm what was on the label. Along the way, a certificate falsely attesting to the purity of the shipment was repeatedly altered, eliminating the name of the manufacturer and previous owner. As a result, traders bought the syrup without knowing where it came from, or who made it. With this information, the traders might have discovered — as The Times did — that the manufacturer was not certified to make pharmaceutical ingredients.

An examination of the two poisoning cases last year — in Panama and earlier in China — shows how China's safety regulations have lagged behind its growing role as low-cost supplier to the world. It also demonstrates how a poorly policed chain of traders in country after country allows counterfeit medicine to contaminate the

global market.

Last week, the United States [Food and Drug Administration](#) warned drug makers and suppliers in the United States “to be especially vigilant” in watching for diethylene glycol. The warning did not specifically mention China, and it said there was “no reason to believe” that glycerin in this country was tainted. Even so, the agency asked that all glycerin shipments be tested for diethylene glycol, and said it was “exploring how supplies of glycerin become contaminated.”

China is already being accused by United States authorities of exporting wheat gluten containing an industrial chemical, melamine, that ended up in pet food and livestock feed. The F.D.A. recently banned imports of Chinese-made wheat gluten after it was linked to pet deaths in the United States.

Beyond Panama and China, toxic syrup has caused mass poisonings in Haiti, Bangladesh, Argentina, Nigeria and twice in India.

In Bangladesh, investigators found poison in seven brands of fever medication in 1992, but only after countless children died. A Massachusetts laboratory detected the contamination after Dr. Michael L. Bennish, a pediatrician who works in developing countries, smuggled samples of the tainted syrup out of the country in a suitcase. Dr. Bennish, who investigated the Bangladesh epidemic and helped write a 1995 article about it for BMJ, formerly known as the British Medical Journal, said that given the amount of medication distributed, deaths “must be in the thousands or tens of thousands.”

“It’s vastly underreported,” Dr. Bennish said of diethylene glycol poisoning. Doctors might not suspect toxic medicine, particularly in poor countries with limited resources and a generally unhealthy population, he said, adding, “Most people who die don’t come to a medical facility.”

The makers of counterfeit glycerin, which superficially looks and acts like the real thing but generally costs considerably less, are rarely identified, much less prosecuted, given the difficulty of tracing shipments across borders. “This is really a global problem, and it needs to be handled in a global way,” said Dr. Henk Bekedam, the [World Health Organization](#)’s top representative in Beijing.

Seventy years ago, medicine laced with diethylene glycol killed more than 100 people in the United States, leading to the passage of the toughest drug regulations of that era and the creation of the modern Food and Drug Administration.

The F.D.A. has tried to help in poisoning cases around the world, but there is only so much it can do.

When at least 88 children died in Haiti a decade ago, F.D.A. investigators traced the poison to the Manchurian city of Dalian, but their attempts to visit the suspected manufacturer were repeatedly blocked by Chinese officials, according to internal State Department records. Permission was granted more than a year later, but by then the plant had moved and its records had been destroyed.

“Chinese officials we contacted on this matter were all reluctant to become involved,” the American Embassy in Beijing wrote in a confidential cable. “We cannot be optimistic about our chances for success in tracking down the other possible glycerine shipments.”

In fact, The Times found records showing that the same Chinese company implicated in the Haiti poisoning also shipped about 50 tons of counterfeit glycerin to the United States in 1995. Some of it was later resold to another American customer, Avatar Corporation, before the deception was discovered.

“Thank God we caught it when we did,” said Phil Ternes, chief operating officer of Avatar, a Chicago-area supplier of bulk [pharmaceuticals](#) and nonmedicinal products. The F.D.A. said it was unaware of the shipment.

In China, the government is vowing to clean up its pharmaceutical industry, in part because of criticism over counterfeit drugs flooding the world markets. In December, two top drug regulators were arrested on charges of taking bribes to approve drugs. In addition, 440 counterfeiting operations were closed down last year, the World Health Organization said.

But when Chinese officials investigated the role of Chinese companies in the Panama deaths, they found that no laws had been broken, according to an official of the nation’s drug enforcement agency. China’s drug regulation is “a black hole,” said one trader who has done business through CNSC Fortune Way, the Beijing-based broker that investigators say was a crucial conduit for the Panama poison.

In this environment, Wang Guiping, a tailor with a ninth-grade education and access to a chemistry book, found it easy to enter the pharmaceutical supply business as a middleman. He quickly discovered what others had before him: that counterfeiting was a simple way to increase profits.

And then people in China began to die.

Cheating the System

Mr. Wang spent years as a tailor in the manufacturing towns of the Yangtze Delta, in eastern China. But he did not want to remain a common craftsman, villagers say. He set his sights on trading chemicals, a business rooted in the many small chemical plants that have sprouted in the region.

“He didn’t know what he was doing,” Mr. Wang’s older brother, Wang Guoping, said in an interview. “He didn’t understand chemicals.”

But he did understand how to cheat the system.

Wang Guiping, 41, realized he could earn extra money by substituting cheaper, industrial-grade syrup — not approved for human consumption — for pharmaceutical grade syrup. To trick pharmaceutical buyers, he forged his licenses and laboratory analysis reports, records show.

Mr. Wang later told investigators that he figured no harm would come from the substitution, because he initially tested a small quantity. He did it with the expertise of a former tailor.

He swallowed some of it. When nothing happened, he shipped it.

One company that used the syrup beginning in early 2005 was Qiqihar No. 2 Pharmaceutical, about 1,000 miles away in Heilongjiang Province in the northeast. A buyer for the factory had seen a posting for Mr. Wang’s syrup on an industry Web site.

After a while, Mr. Wang set out to find an even cheaper substitute syrup so he could increase his profit even more, according to a Chinese investigator. In a chemical book he found what he was looking for: another odorless syrup — diethylene glycol. At the time, it sold for 6,000 to 7,000 yuan a ton, or about \$725 to \$845, while pharmaceutical-grade syrup cost 15,000 yuan, or about \$1,815, according to the investigator.

Mr. Wang did not taste-test this second batch of syrup before shipping it to Qiqihar Pharmaceutical, the government investigator said, adding, “He knew it was dangerous, but he didn’t know that it could kill.”

The manufacturer used the toxic syrup in five drug products: ampules of Amillarisin A for gall bladder problems; a special enema fluid for children; an injection for blood vessel diseases; an intravenous pain reliever; and an [arthritis](#) treatment.

In April 2006, one of southern China's finest hospitals, in Guangzhou, Guangdong Province, began administering Amillarisin A. Within a month or so, at least 18 people had died after taking the medicine, though some had already been quite sick.

Zhou Jianhong, 33, said his father took his first dose of Amillarisin A on April 19. A week later he was in critical condition. "If you are going to die, you want to die at home," Mr. Zhou said. "So we checked him out of the hospital." He died the next day.

"Everybody wants to invest in the pharmaceutical industry and it is growing, but the regulators can't keep up," Mr. Zhou said. "We need a system to assure our safety."

The final death count is unclear, since some people who took the medicine may have died in less populated areas.

In a small town in Sichuan Province, a man named Zhou Lianghui said the authorities would not acknowledge that his wife had died from taking tainted Amillarisin A. But Mr. Zhou, 38, said he matched the identification number on the batch of medicine his wife received with a warning circular distributed by drug officials.

"You probably cannot understand a small town if you are in Beijing," Zhou Lianghui said in a telephone interview. "The sky is high, and the emperor is far away. There are a lot of problems here that the law cannot speak to."

The failure of the government to stop poison from contaminating the drug supply caused one of the bigger domestic scandals of the year. Last May, China's premier, [Wen Jiabao](#), ordered an investigation of the deaths, declaring, "The pharmaceutical market is in disorder."

At about the same time, 9,000 miles away in Panama, the long rainy season had begun. Anticipating [colds](#) and coughs, the government health program began manufacturing cough and antihistamine syrup. The cough medicine was sugarless so that even [diabetics](#) could use it.

The medicine was mixed with a pale yellow, almost translucent syrup that had arrived in 46 barrels from Barcelona on the container ship Tobias Maersk. Shipping records showed the contents to be 99.5 percent pure glycerin.

It would be months and many deaths later before that certification was discovered to be pure fiction.

A Mysterious Illness

Early last September, doctors at Panama City's big public hospital began to notice patients exhibiting unusual symptoms.

They initially appeared to have Guillain-Barré syndrome, a relatively rare neurological disorder that first shows up as a weakness or tingling sensation in the legs. That weakness often intensifies, spreading upward to the arms and chest, sometimes causing total paralysis and an inability to breathe.

The new patients had paralysis, but it did not spread upward. They also quickly lost their ability to urinate, a

condition not associated with Guillain-Barré. Even more unusual was the number of cases. In a full year, doctors might see eight cases of Guillain-Barré, yet they saw that many in just two weeks.

Doctors sought help from an infectious disease specialist, Néstor Sosa, an intense, driven doctor who competes in triathlons and high-level chess.

Dr. Sosa's medical specialty had a long, rich history in Panama, once known as one of the world's unhealthiest places. In one year in the late 1800s, a lethal mix of yellow fever and [malaria](#) killed nearly 1 in every 10 residents of Panama City. Only after the United States managed to overcome those mosquito-borne diseases was it able to build the Panama Canal without the devastation that undermined an earlier attempt by the French.

The suspected Guillain-Barré cases worried Dr. Sosa. "It was something really extraordinary, something that was obviously reaching epidemic dimensions in our hospital," he said.

With the death rate from the mystery illness near 50 percent, Dr. Sosa alerted the hospital management, which asked him to set up and run a task force to handle the situation. The assignment, a daunting around-the-clock dash to catch a killer, was one he eagerly embraced.

Several years earlier, Dr. Sosa had watched as other doctors identified the cause of another epidemic, later identified as hantavirus, a pathogen spread by infected rodents.

"I took care of patients but I somehow felt I did not do enough," he said. The next time, he vowed, would be different.

Dr. Sosa set up a 24-hour "war room" in the hospital, where doctors could compare notes and theories as they scoured medical records for clues.

As a precaution, the patients with the mystery illness were segregated and placed in a large empty room awaiting renovation. Health care workers wore masks, heightening fears in the hospital and the community.

"That spread a lot of panic," said Dr. Jorge Motta, a cardiologist who runs the Gorgas Memorial Institute, a widely respected medical research center in Panama. "That is always a terrifying thought, that you will be the epicenter of a new infectious disease, and especially a new infectious disease that kills with a high rate of death, like this."

Meanwhile, patients kept coming, and hospital personnel could barely keep up.

"I ended up giving C.P.R.," Dr. Sosa said. "I haven't given C.P.R. since I was a resident, but there were so many crises going on."

Frightened hospital patients had to watch others around them die for reasons no one understood, fearing that they might be next.

As reports of strange Guillain-Barré symptoms started coming in from other parts of the country, doctors realized they were not just dealing with a localized outbreak.

Pascuala Pérez de González, 67, sought treatment for a cold at a clinic in Coclé Province, about a three-hour drive from Panama City. In late September she was treated and sent home. Within days, she could no longer eat; she stopped urinating and went into convulsions.

A decision was made to take her to the public hospital in Panama City, but on the way she stopped breathing and had to be resuscitated. She arrived at the hospital in a deep coma and later died.

Medical records contained clues but also plenty of false leads. Early victims tended to be males older than 60 and diabetic with high [blood pressure](#). About half had been given Lisinopril, a blood pressure medicine distributed by the public health system.

But many who did not receive Lisinopril still got sick. On the chance that those patients might have forgotten that they had taken the drug, doctors pulled Lisinopril from pharmacy shelves — only to return it after tests found nothing wrong.

Investigators would later discover that Lisinopril did play an important, if indirect role in the epidemic, but not in the way they had imagined.

A Major Clue

One patient of particular interest to Dr. Sosa came into the hospital with a heart attack, but no Guillain-Barré-type symptoms. While undergoing treatment, the patient received several drugs, including Lisinopril. After a while, he began to exhibit the same neurological distress that was the hallmark of the mystery illness.

“This patient is a major clue,” Dr. Sosa recalled saying. “This is not something environmental, this is not a folk medicine that’s been taken by the patients at home. This patient developed the disease in the hospital, in front of us.”

Soon after, another patient told Dr. Sosa that he, too, developed symptoms after taking Lisinopril, but because the medicine made him cough, he also took cough syrup — the same syrup, it turned out, that had been given to the heart patient.

“I said this has got to be it,” Dr. Sosa recalled. “We need to investigate this cough syrup.”

The cough medicine had not initially aroused much suspicion because many victims did not remember taking it. “Twenty-five percent of those people affected denied that they had taken cough syrup, because it’s a nonevent in their lives,” Dr. Motta said.

Investigators from the United States [Centers for Disease Control and Prevention](#), who were in Panama helping out, quickly put the bottles on a government jet and flew them to the United States for testing. The next day, Oct. 11, as Panamanian health officials were attending a news conference, a Blackberry in the room went off.

The tests, the C.D.C. was reporting, had turned up diethylene glycol in the cough syrup.

The mystery had been solved. The barrels labeled glycerin turned out to contain poison.

Dr. Sosa’s exhilaration at learning the cause did not last long. “It’s our medication that is killing these people,” he said he thought. “It’s not a virus, it’s not something that they got outside, but it was something we actually manufactured.”

A nationwide campaign was quickly begun to stop people from using the cough syrup. Neighborhoods were searched, but thousands of bottles either had been discarded or could not be found.

As the search wound down, two major tasks remained: count the dead and assign blame. Neither has been

easy.

A precise accounting is all but impossible because, medical authorities say, victims were buried before the cause was known, and poor patients might not have seen doctors.

Another problem is that finding traces of diethylene glycol in decomposing bodies is difficult at best, medical experts say. Nonetheless, an Argentine pathologist who has studied diethylene glycol poisonings helped develop a test for the poison in exhumed bodies. Seven of the first nine bodies tested showed traces of the poison, Panamanian authorities said.

With the rainy season returning, though, the exhumations are about to end. Dr. José Vicente Pachar, director of Panama's Institute of Legal Medicine and Forensic Sciences, said that as a scientist he would like a final count of the dead. But he added, "I should accept the reality that in the case of Panama we are not going to know the exact number."

Local prosecutors have made some arrests and are investigating others connected to the case, including officials of the import company and the government agency that mixed and distributed the cold medicine. "Our responsibilities are to establish or discover the truth," said Dimas Guevara, the homicide investigator guiding the inquiry.

But prosecutors have yet to charge anyone with actually making the counterfeit glycerin. And if the Panama investigation unfolds as other inquiries have, it is highly unlikely that they ever will.

A Suspect Factory

Panamanians wanting to see where their toxic nightmare began could look up the Web site of the company in Hengxiang, China, that investigators in four countries have identified as having made the syrup — the Taixing Glycerine Factory. There, under the words "About Us," they would see a picture of a modern white building nearly a dozen stories tall, adorned by three arches at the entrance. The factory, the Web site boasts, "can strictly obey the contract and keep its word."

But like the factory's syrup, all is not as it seems.

There are no tall buildings in Hengxiang, a country town with one main road. The factory is not certified to sell any medical ingredients, Chinese officials say. And it looks nothing like the picture on the Internet. In reality, its chemicals are mixed in a plain, one-story brick building.

The factory is in a walled compound, surrounded by small shops and farms. In the spring, nearby fields of rape paint the countryside yellow. Near the front gate, a sign over the road warns, "Beware of counterfeits." But it was posted by a nearby noodle machine factory that appears to be worried about competition.

The Taixing Glycerine Factory bought its diethylene glycol from the same manufacturer as Mr. Wang, the former tailor, the government investigator said. From this spot in China's chemical country, the 46 barrels of toxic syrup began their journey, passing from company to company, port to port and country to country, apparently without anyone testing their contents.

Traders should be thoroughly familiar with their suppliers, United States health officials say. "One simply does not assume that what is labeled is indeed what it is," said Dr. Murray Lumpkin, deputy commissioner for international and special programs for the Food and Drug Administration.

In the Panama case, names of suppliers were removed from shipping documents as they passed from one

entity to the next, according to records and investigators. That is a practice some traders use to prevent customers from bypassing them on future purchases, but it also hides the provenance of the product.

The first distributor was the Beijing trading company, CNSC Fortune Way, a unit of a state-owned business that began by supplying goods and services to Chinese personnel and business officials overseas.

As China's market reach expanded, Fortune Way focused its business on pharmaceutical ingredients, and in 2003, it brokered the sale of the suspect syrup made by the Taixing Glycerine Factory. The manufacturer's certificate of analysis showed the batch to be 99.5 percent pure.

Whether the Taixing Glycerine Factory actually performed the test has not been publicly disclosed.

Original certificates of analysis should be passed on to each new buyer, said Kevin J. McGlue, a board member of the International Pharmaceutical Excipients Council. In this case, that was not done.

Fortune Way translated the certificate into English, putting its name — not the Taixing Glycerine Factory's — at the top of the document, before shipping the barrels to a second trading company, this one in Barcelona.

Li Can, managing director at Fortune Way, said he did not remember the transaction and could not comment, adding, "There is a high volume of trade."

Upon receiving the barrels in September 2003, the Spanish company, Rasfer International, did not test the contents, either. It copied the chemical analysis provided by Fortune Way, then put its logo on it. Ascensión Criado, Rasfer's manager, said in an e-mail response to written questions that when Fortune Way shipped the syrup, it did not say who made it.

Several weeks later, Rasfer shipped the drums to a Panamanian broker, the Medicom Business Group. "Medicom never asked us for the name of the manufacturer," Ms. Criado said.

A lawyer for Medicom, Valentín Jaén, said his client was a victim, too. "They were tricked by somebody," Mr. Jaén said. "They operated in good faith."

In Panama, the barrels sat unused for more than two years, and officials said Medicom improperly changed the expiration date on the syrup.

During that time, the company never tested the product. And the Panamanian government, which bought the 46 barrels and used them to make cold medicine, also failed to detect the poison, officials said.

The toxic pipeline ultimately emptied into the bloodstream of people like Ernesto Osorio, a former high school teacher in Panama City. He spent two months in the hospital after ingesting poison cough syrup last September.

Just before Christmas, after a kidney dialysis treatment, Mr. Osorio stood outside the city's big public hospital in a tear-splattered shirt, describing what his life had become.

"I'm not an eighth of what I used to be," Mr. Osorio said, his partly paralyzed face hanging like a slab of meat. "I have trouble walking. Look at my face, look at my tears." The tears, he said apologetically, were not from emotion, but from nerve damage.

And yet, Mr. Osorio knows he is one of the lucky victims.

“They didn’t know how to keep the killer out of the medicine,” he said simply.

While the suffering in Panama was great, the potential profit — at least for the Spanish trading company, Rasfer — was surprisingly small. For the 46 barrels of glycerin, Rasfer paid Fortune Way \$9,900, then sold them to Medicom for \$11,322, according to records.

Chinese authorities have not disclosed how much Fortune Way and the Taixing Glycerine Factory made on their end, or how much they knew about what was in the barrels.

“The fault has to be traced back to areas of production,” said Dr. Motta, the cardiologist in Panama who helped uncover the source of the epidemic. “This was my plea — please, this thing is happening to us, make sure whoever did this down the line is not doing it to Peru or Sierra Leone or some other place.”

A Counterfeiter’s Confession

The power to prosecute the counterfeiters is now in the hands of the Chinese.

Last spring, the government moved quickly against Mr. Wang, the former tailor who poisoned Chinese residents.

The authorities caught up with him at a roadblock in Taizhou, a city just north of Taixing, in chemical country. He was weak and sick, and he had not eaten in two days. Inside his white sedan was a bankbook and cash. He had fled without his wife and teenage son.

Chinese patients were dead, a political scandal was brewing and the authorities wanted answers. Mr. Wang was taken to a hospital. Then, in long sessions with investigators, he gave them what they wanted, explaining his scheme, how he tested industrial syrup by drinking it, how he decided to use diethylene glycol and how he conned pharmaceutical companies into buying his syrup, according to a government official who was present for his interrogation.

“He made a fortune, but none of it went to his family,” said Wang Xiaodong, a former village official who knows Mr. Wang and his siblings. “He liked to gamble.”

Mr. Wang remains in custody as the authorities decide whether he should be put to death. The Qiqihar drug plant that made the poisonous medicine has been closed, and five employees are now being prosecuted for causing “a serious accident.”

In contrast to the Wang Guiping investigation, Chinese authorities have been tentative in acknowledging China’s link to the Panama tragedy, which involved a state-owned trading company. No one in China has been charged with committing the fraud that ended up killing so many in Panama.

Sun Jing, the pharmaceutical program officer for the World Health Organization in Beijing, said the health agency sent a fax “to remind the Chinese government that China should not be selling poisonous products overseas.” Ms. Sun said the agency did not receive an official reply.

Last fall, at the request of the United States — Panama has no diplomatic relations with China — the State Food and Drug Administration of China investigated the Taixing Glycerine Factory and Fortune Way.

The agency tested one batch of glycerin from the factory, and found no glycerin, only diethylene glycol and two other substances, a drug official said.

Since then, the Chinese drug administration has concluded that it has no jurisdiction in the case because the factory is not certified to make medicine.

The agency reached a similar conclusion about Fortune Way, saying that as an exporter it was not engaged in the pharmaceutical business.

“We did not find any evidence that either of these companies had broken the law,” said Yan Jiangying, a spokeswoman for the drug administration. “So a criminal investigation was never opened.”

A drug official said the investigation was subsequently handed off to an agency that tests and certifies commercial products — the General Administration of Quality Supervision, Inspection and Quarantine.

But the agency acted surprised to learn that it was now in charge. “What investigation?” asked Wang Jian, director of its Taixing branch. “I’m not aware of any investigation involving a glycerin factory.”

Besides, Huang Tong, an investigator in that office, said, “We rarely get involved in products that are sold for export.”

Wan Qigang, the legal representative for the Taixing Glycerine Factory, said in an interview late last year that the authorities had not questioned him about the Panama poisoning, and that his company made only industrial-grade glycerin.

“I can tell you for certain that we have no connection with Panama or Spain,” Mr. Wan said.

But in recent months, the Glycerine Factory has advertised 99.5 percent pure glycerin on the Internet.

Mr. Wan recently declined to answer any more questions. “If you come here as a guest, I will welcome you,” Mr. Wan said. “But if you come again wanting to talk about this matter, I will make a telephone call.”

A local government official said Mr. Wan was told not to grant interviews.

A five-minute walk away, another manufacturer, the Taixing White Oil Factory, also advertises medical glycerin on the Internet, yet it, too, has no authorization to make it. The company’s Web site says its products “have been exported to America, Australia and Italy.”

Ding Xiang, who represents the White Oil Factory, denied that his company made pharmaceutical-grade glycerin, but he said chemical trading companies in Beijing often called, asking for it.

“They want us to mark the barrels glycerin,” Mr. Ding said in late December. “I tell them we cannot do that.”

Mr. Ding said he stopped answering calls from Beijing. “If this stuff is taken overseas and improperly used. ...” He did not complete the thought.

In chemical country, product names are not always what they seem.

“The only two factories in Taixing that make glycerin don’t even make glycerin,” said Jiang Peng, who oversees inspections and investigations in the Taixing branch of the State Food and Drug Administration. “It is a different product.”

All in a Name

One lingering mystery involves the name of the product made by the Taixing Glycerine Factory. The factory

had called its syrup “TD” glycerin. The letters TD were in virtually all the shipping documents. What did TD mean?

Spanish medical authorities concluded that it stood for a manufacturing process. Chinese inspectors thought it was the manufacturer’s secret formula.

But Yuan Kailin, a former salesman for the factory , said he knew what the TD meant because a friend and former manager of the factory, Ding Yuming, had once told him. TD stood for the Chinese word “tidai” (pronounced tee-die), said Mr. Yuan, who left his job in 1998 and still lives about a mile from the factory.

In Chinese, tidai means substitute. A clue that might have revealed the poison, the counterfeit product, was hiding in plain sight.

It was in the product name.

Renwick McLean and Brent McDonald contributed reporting.

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China is accused of exporting wheat gluten containing the industrial chemical melamine that was detected in pet food and livestock feed in the United States in 2007. The U.S. Food and Drug Administration (FDA) banned imports of Chinese wheat gluten after the melamine-contaminated ingredient was traced to a single supplier in China and associated with kidney failure and death in many cats and dogs [1]. The Consumer Product Safety Commission announced in June 2007 the recall of several children's items imported from China because of lead contamination. 4. From China to Panama, a Trail of Poisoned Medicine. New York Times, May 6, 2007. Available at: <http://www.nytimes.com/2007/05/06/world/americas/06poison.html>. Accessed January 16, 2008. Other World News. From China to Panama, a Trail of Poisoned Join the Unexplained Mysteries community today! It's free and setting up an account only takes a moment. Over the years, the poison has been loaded into all varieties of medicine – cough syrup, fever medication, injectable drugs – a result of counterfeiters who profit by substituting the sweet-tasting solvent for a safe, more expensive syrup, usually glycerin, commonly used in drugs, food, toothpaste and other products. Toxic syrup has figured in at least eight mass poisonings around the world in the past two decades. Researchers estimate that thousands have died. In many cases, the precise origin of the poison has never been determined.