

Researchers find harmful chemicals in drinking water

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News Writer

Researchers at the University of Alberta looking into the quality of our local water supply and have found something interesting—nitrosamines. And while the word might not mean much to the average person, they may pose a serious threat to the quality of our drinking water.

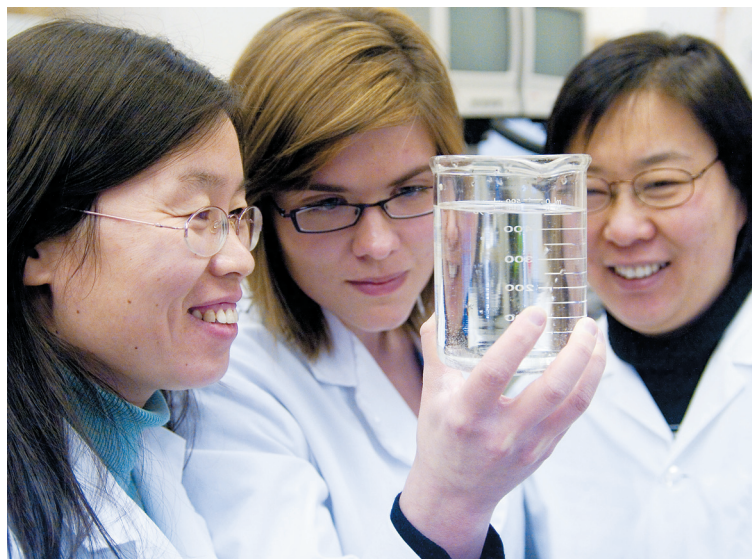
The water disinfection process is essential to reduce the danger of waterborne diseases such as cholera and typhoid. The disinfectants used, however, react with naturally occurring materials in the water to produce what are called disinfection byproducts (DBPs)—which may include nitrosamines. As many DBPs are considered to be potent carcinogenic (cancer-causing), the identification of nitrosamines has become a major area of interest for environmental scientists, including Dr Xingfang Li, an associate professor with environmental health sciences at the University of Alberta.

“Population studies show some relationship between cancer risk and the disinfection process,” Li said.

Although many DBPs have already been detected, epidemiological studies suggest that these identified byproducts don't explain the cancer risk. The researchers believe that there may be unidentified compounds, whose discovery could be crucial to insuring the safety of our water supplies.

“The reason for the study is to see if the nitrosamines are in the water, discover how they are produced, and find ways to minimize their occurrence,” Li explained.

Using a technique called Liquid Chromatography Tandem Mass Spectrometry, the researchers have successfully found some previously



PHIL HEAD

H2WHOA Yuan Yuan Zhao, Jessica Boyd and Xing-Fang Fi work together.

unidentified compounds.

By using a column packed with a special material, the researchers were able to detect the mystery nitrosamines. Although water passed through the column readily, nitrosamines in the water would stick to the column material. As some compounds stick better than others, and thus leaving the column at different times, researchers were able to separate the nitrosamines as they pass through the instrument.

“Our method can detect a wider range of nitrosamines than other methods currently in use,” Li said.

The method being used by the U of A scientists is able to detect concentrations as low as one-billionth of a gram for every liter of water. It's unknown whether or not this low of a concentration poses any threat to the health of a population; however, concentrations can vary depending on how far away from a treatment plant the sample is taken.

Since nitrosamines are a suspected byproduct of the disinfection process, the amount present in the water may depend on how long it has been in the water supply following the treatment. In fact, the researchers showed that in one study, the concentration of nitrosamines increased with distance from the treatment plant. Li explained that these factors were all important in judging the quality of the water.

“It is important to understand the source of the water, the treatment methods used and the distribution process,” Li said.

Although the research raises questions regarding the safety of drinking water, its motivation is to simply to gain a better understanding of the compounds found in the public water supply.

“The point of the study is not to scare people but to do the basic science required to insure high quality drinking water,” Li said.

RATT picking up 'Plant clientele

'PLANT • CONTINUED FROM PAGE 1

“All the business that we've lost from Monday to Wednesday, when we shut down the plant, is actually being picked up by RATT. So, RATT is having one of its best years in years,” Cunningham said, explaining that RATT has made \$20 000 more since the beginning of the semester than it did during the the same period last

year.

Despite the losses registered by the buffet and coffee shop, Cunningham said that there were no changes planned for the business plan when the second semester begins in January. He warned that only the financial figures from Septemeber and October were available, and that any changes in direction for the

business would take more than two months to become apparent.

“This is a trial run, so we're going to hold off [on major changes.] There's really no plan to do [any] at this time. I think it's important that we give this operation time to establish itself,” Cunningham said.

In the 2005/06 year, the Powerplant lost \$173 495 in total.

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RATT

HEY! new hours

- MON - WED 11 am TO 1 am
LAST CALL AT MIDNIGHT
- THURS 11 am TO 2 am
LAST CALL AT 1 am
- FRI 11 am TO 3 am
LAST CALL AT 2 am
- SAT 3 pm TO 3 am
LAST CALL AT 2 am

THE POWERPLANT

BAR HOURS

- THURS - FRI 11 am TO 2 am
- SAT 8 pm TO 2 am

RELAXATION SPACE

- MON - WED 8am - 8pm

oh...and don't forget

happy hour:

RATT >> MONDAY TO FRIDAY >> 2-6 PM
draught pint and jug specials >>>>>

powerplant >> THURS and FRI >> 2-6 PM

>> UPCOMING @ RATT OILER GAMES

DON'T FORGET: RATT GIVES AWAY A PAIR OF TICKETS 1/2 HOUR BEFORE EVERY HOME GAME. ALL PAY-PER-VIEW OILER GAMES WILL BE SHOWN AT RATT.

THURSDAY, NOVEMBER 30 >> 7PM
OILERS PLAY HOST TO COLORADO. NEW WINNING STREAK??? WIN TICKETS

SATURDAY, DECEMBER 2 >> 6PM
NOT TELEVISED. YEAH, I KNOW....SUCKS. TICKET DRAW FOR THIS GAME WILL BE DURING THE COLORADO GAME. BONUS TIME!!!!!!

MONDAY, DECEMBER 4 >> 8PM
OILERS IN VANCOUVER. THE LONG HOMESTAND IS OVER.

WEDNESDAY, DECEMBER 6 >> 730 PM
LAST DAY OF CLASSES
OILERS GET A CRACK AT THE CAROLINA HURRICANES. REMEMBER THEM?? WIN TICKETS.

>>> RATT AND MOLSON CANADIAN WILL BE GIVING AWAY A PAIR OF TICKETS TO EVERY HOME GAME. draws are made 1/2 hour before each game <<<

MOLSON Canadian jugs are \$9.75 DURING THE game, Canadian BOTTLES are \$3.

POWERPLANT BAR IS OPEN WEDNESDAY, DECEMBER 6 STARTING AT 11AM - LAST DAY OF CLASSES.

POWERPLANT BUFFET DAILY MENU THEMES

MONDAY >> Chef's Choice
(it's a wild card day - pleasant surprises to start the week)

TUESDAY >> Vegetarian
(a few more Veggie choices than usual)

WEDNESDAY >> PASTA (MORE ENERGY FOR HUMP DAY)

THURSDAY >> ORIENTAL (STIR FRIES, ETC.)

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