



Town Council Agenda Report

SUBJECT: Resolution

TITLE OF AGENDA ITEM: A Resolution of the Town of Davie, Florida, authorizing the expenditure of \$5000.00 from the Law Enforcement Trust Fund toward the purchase of robotic laboratory equipment used by the Medical Examiner's Office.

REPORT IN BRIEF: The Broward Police Departments, through the Broward Chiefs of Police Association, are each contributing \$5000.00 to help defray the total \$250,000 cost of this needed equipment. This equipment provides for chemical analysis of body fluids in mandated medical examiner cases, which will automatically process biological specimens 24 hours per day, 7 days per week.. The Zymate system utilizes a series of automated laboratory stations and a computer controller with software to automate a wide range of laboratory procedures. It is especially valuable for complex trace extraction procedures such as the extraction of drugs and metabolites from biological matrices. The acquisition of this equipment will enable the Medical Examiner's Office to expedite the analysis necessary for toxicological cases within the twenty-one day framework established by the State Attorney's office for criminal prosecution. This resolution requests the contribution be funded from the Law Enforcement Trust Fund.

PREVIOUS ACTIONS: N/A

CONCURRENCES: N/A

FISCAL IMPACT:

Is appropriation required? no
Funding appropriated? yes If yes, amount \$5,000.00
Account Name: Law Enforcement Trust Fund
Additional Comments: N/A

RECOMMENDATION(S): Motion to approve the resolution.

Attachment(s):

Resolution, Informational brochure on Zymate System

RESOLUTION NO. _____

A RESOLUTION OF THE TOWN OF DAVIE, FLORIDA, AUTHORIZING THE EXPENDITURE OF \$5000.00 FROM THE LAW ENFORCEMENT TRUST FUND TOWARDS THE PURCHASE OF ROBOTIC LABORATORY EQUIPMENT USED BY THE MEDICAL EXAMINER'S OFFICE

WHEREAS, the Division of Medical Examiner and Trauma Services, servicing Broward County Police Departments, is in need of a Zymark Zymate Laboratory Robotic System valued at \$250,000.00; and

WHEREAS, the ever growing volume of caseloads of the Broward County Police Departments, Broward Sheriff's Office and Florida Highway Patrol, the acquisition of this equipment will enable the Medical Examiner's Office to expedite the analysis necessary for toxicological cases within the twenty-one day framework established by the State Attorney's Office for criminal prosecution; and

WHEREAS, in a survey conducted by the Broward County Chiefs of Police Association, excluding Florida Highway Patrol and the Broward County Sheriff's Office, the Davie Police Department ranks fifth in a three year period in the utilization of these services and would benefit greatly with this robotic laboratory equipment providing results in a timely manner; and

WHEREAS, in conjunction with the Broward County Chief's Association, Broward County Police Departments are each making a contribution in the amount of \$5000.00 toward the purchase of this robotic laboratory equipment, which will not only streamline the operation of the office of the Medical Examiner, but also facilitate enhanced identification and prosecution of cases with the State Attorney's Office; and

WHEREAS, The Davie Police Department wishes to contribute \$5000.00 toward the purchase of the Zymark Zymate Laboratory Robotic System, with funding to be from the Law Enforcement Trust Fund, in accordance with Florida State Statute 932.704, which is not a recurring cost.

NOW, THEREFORE, BE IT RESOLVED BY THE TOWN COUNCIL OF THE TOWN OF DAVIE, FLORIDA:

SECTION 1. That the Town Council of the Town of Davie hereby authorizes the expenditure of \$5000.00, to the Broward County Chiefs of Police Association, toward the purchase of a Zymark Zymate Robotic Laboratory System to be used by the Division of Medical Examiner and Trauma Services.

SECTION 2. The Town Council of the Town of Davie authorizes this expenditure of \$5000.00 from the Law Enforcement Trust Fund.

SECTION 3. This resolution shall take effect immediately upon its passage and adoption.

PASSED AND ADOPTED THIS _____ DAY OF _____, 1999

MAYOR COUNCILMEMBER

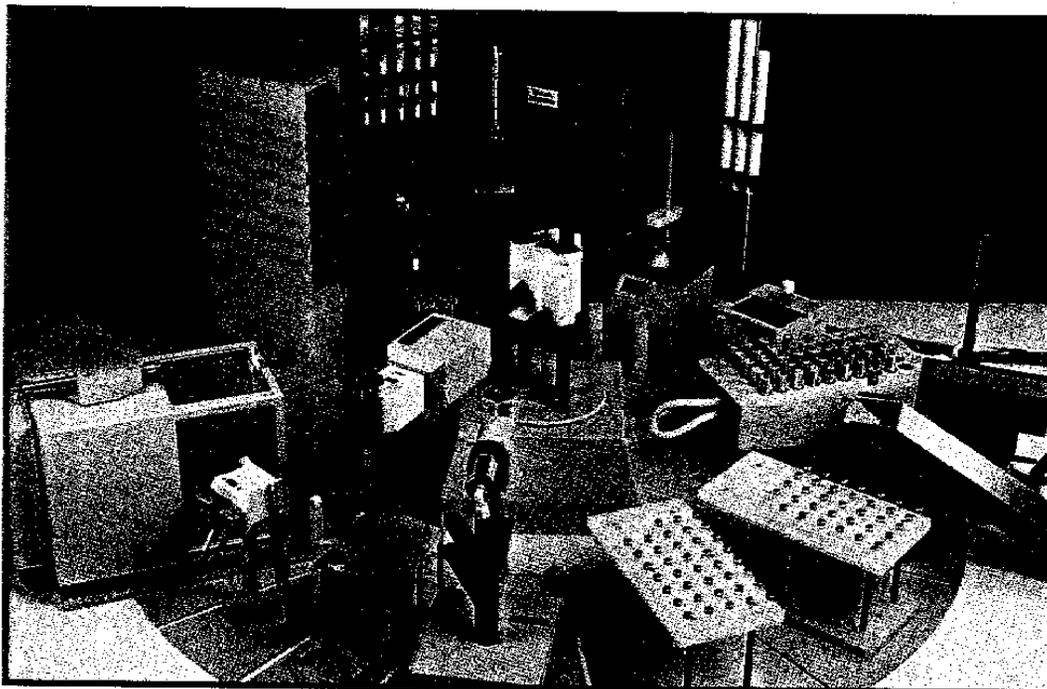
ATTEST:

TOWN CLERK

APPROVED THIS _____ DAY OF _____, 1999

The Zymate System

For Precise, Reliable
GC/MS Sample Preparation



The Zymate System utilizes the Zymate II Laboratory Robot, a series of automated Laboratory Stations, and a computer Controller with EasyLab™ software to automate a wide range of laboratory procedures. It is especially valuable for complex trace extraction procedures such as the extraction of drugs and metabolites from biological matrices.

Over 1500 Zymate Systems Installed

Leading companies from around the world are turning to Zymark to help them automate time-consuming sample preparation and processing procedures. Zymark is the pioneer and technology leader in the application of robotics to laboratory operations.

Benefits of the Zymate System for drug testing include:

- Reduces the need for repeat assays
- Reduces false positives
- Eliminates sample cross contamination
- Improves sample turnaround time
- Produces defensible audit trail
- Creates more interesting, rewarding jobs for laboratory personnel.

The Automated Procedures Include:

- Temperature Controllable Sample Storage
- Reading of the Sample Barcode
- Sampling of Blood, Plasma, or Urine
- Sample Aliquoting and Weighing
- Reagent and Buffer Addition
- Internal Standard Addition
- Hydrolysis if Required
- Solid Phase Extraction
- Evaporation and Reconstitution
- Derivatization
- Sample Storage in a GC Vial

Description of the Zymark Laboratory Robotic System

The laboratory robotic equipment will be able to automatically process biological specimens (e.g., blood and urine) 24 hours per day, 7 days per week. The system will automate 97% of the current labor intensive specimen preparation procedures which are required for samples to be introduced into analytical instruments for drug identification and quantification. These very time consuming specimen preparation procedures involve "cleaning up" a sample (i.e., removing all of the fats, cholesterol, proteins, RBCs, WBCs, etc.) so that a clean sample, containing only the drugs that are present, can be analyzed. Since the current manual sample handling will be significantly reduced, errors will also be significantly reduced. Accuracy and precision will greatly improve due to the capability to increase quality control and the exacting reproducibility of the robotic sample processing. The robotic system will even transfer the final clean sample into a small vial, seal the vial and load the sample onto two different analytical instruments. This will enable the toxicologists to become more efficient by focusing strictly on data analysis instead of specimen preparation. The chain of custody will be enhanced by tracking samples using bar code labels and by minimizing the number of times a samples is handled. Ultimately, the turnaround time will markedly decrease without the need for additional staff; therefore, the toxicology results will be better, faster and cheaper.

6 - Goal: To aid law enforcement agencies in the prosecution of criminals through speedier trials by decreasing turn-around-time for chemical analysis in mandated medical examiner homicide cases.

Objective: To automate 97% of the labor intensive sample processing procedures with a robotic system.

Objective: To expedite the reporting time of toxicology testing from 30 + days to less than 15 days in 93% of all mandated cases and DUI cases.

Objective: To respond effectively 100% of the time to the requirements of the courts for timely legal reporting.

Objective: To increase the efficiency of error-free results in toxicological testing through 24 hour a day robotics and automation.

Objective: To increase two toxicologist's allocation of time by 40% to perform data manipulation important to the determination of cause and manner of death, instead of performing non-technical labor intensive tasks necessary for the preparation of specimens for analysis.

Objective: To minimize the number of times a specimen is handled from 8 times to 2 times for analyses; thereby, reducing the chance for error.

Objective: To obtain computer generated results for all tests performed.

Objective: To electronically document and maintain the integrity of the specimen tracking or chain-of-custody.

Objective: To reduce the need for additional toxicological staff at this time.

#8 - Description of Proposed Project:

The primary function of the Toxicology Laboratory is to test biological specimens for the presence or absence of drugs of abuse, medications, poisons and other toxic substances. We propose the purchase of a Zymark Zymate Laboratory Robotic System to automate the Laboratory.

In a very oversimplified explanation, the specimens (e.g., blood) must be "cleaned up" before testing can be performed on an analytical instrument (things like lipids, hemoglobin, cholesterol and proteins are removed). Only the drugs that are present to begin with remain.

The Zymark Zymate Laboratory Robotic System "cleans up" the sample in one comprehensive procedure. Otherwise, this is a very laborious process, since a single sample may have to go through multiple clean up extraction procedures, tying up a toxicologist who could be processing data.

See above objectives for benefits.

#10 - Performance Measures

Percent of test results obtained for cases in less than 21 days.

Number of Medical Examiner cases tested.

Percent of case reports completed for doctors and other agencies.

Number of other agency cases tested, including DUI for law enforcement.

#12 Impact without the robotic system:

For FY2000 we would require additional technical staff.

We could not eliminate the errors associated with manual processing of samples.

We would not meet the requirements of the courts for timely legal reporting.

The testing will not be as comprehensive because of the time need to clean up samples versus the time used to examine the data.

With robotics, the quality control can be increased. Without it, we have nominal quality control.

We would continue to have only minimal time to do necessary developmental work.