

THE MAJOR CHALLENGES FACING THE PROPER APPLICATION OF CHEMICAL SAFETY REGULATIONS IN THE THIRD WORLD COUNTRIES

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Training Host

Bristol-Myers Squibb Company,
NJ, USA

- Pharmaceutical research and development operation sites in New Brunswick, Lawrenceville and Hopewell, NJ, USA
- Marisol Solvent Recycling Company, Bound Brook, NJ, USA.

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The major training topics

- **Laboratory Safety and Personal Protective Equipments (PPE)**
- **Handling, transport and storage of hazardous chemicals**
- **Chemical and biological waste management**
- **Health and Environment**
- **Medical surveillance guidelines**

- **The present situation in the Egyptian universities**
- **The achievements**
- **The challenges and retardations**
- **New initiatives for expansion of the program**

The current situation in the Egyptian universities

- **The design of the chemistry labs. is defective, no efficient hoods or ventilation cabinets**
- **No PPE such as safety showers, eyewash and sufficient fire extinguishers.**
- **There are no storage cabinets**
- **The handling, transport and storage of chemicals are very primitive.**
- **The chemical and biological wastes are disposed through sanitary drain, and solid wastes are treated as normal garbage.**
- **No periodic medical monitoring system for the employee**
- **No incinerators**

UNIVERSITY OF MANSOURA

	Faculty	No. of students	No. of Staff members
1	Faculty of Medicine	7521	1131
2	Faculty of Pharmacy	6801	171
3	Faculty of Natural Sciences	2717	469
4	Faculty of Education	17645	212
5	Faculty of Engineering	7132	348
6	Faculty of Agriculture	1749	273
7	Faculty of Dentistry	1003	151
8	Faculty of Nursing	1024	58
9	Faculty of Veterinary Medicine	1473	72
10	Faculty of Computer Sciences	903	42
11	Faculty of Commerce	16704	160
12	Faculty of law	12830	77
13	Faculty of Arts & Humanities	16115	175
14	Faculty of Specific Education	2590	72
15	Faculty of Sports	1296	61

A detailed report (in Arabic) about the present situation was prepared indicating that there should be an immediate action to improve the situation and to start an integrated program to protect the people and environment. In addition, I suggested some immediate measures. The report was sent to:

- Minister of Health**
- Minister of Higher education and scientific research**
- Minister of Industry**
- Minister of Environmental affairs**
- All university presidents**
- Directors of the research centres.**

Achievements

- The use of some PPE as eye protection glasses and gloves was considered obligatory in all laboratories
- The laboratory ventilation was increased via installation of more efficient exhaust fans
- The laboratories were supplied with safety showers, eye washers, and fire extinguishers
- A new training program was introduced for laboratory technicians, and postgraduate students. The program covers the major topics of EHS. The admission for the program was open to all the technicians and postgraduate students of Mansoura university
- The employee were subjected to full medical examination !!!!

- **We organized several symposia and seminars about the major topics of EHS. The audiences were from all the Egyptian universities and chemical and pharmaceutical industries.**
- **The chemical stores were reformed taking the chemical incompatibilities in consideration**
- **The HPLC laboratories were supplied with solvent recyclers (Alltech 345)**
- **The laboratories and chemical stores were supplied with the information data sheets of all the available chemicals**

The major challenges

- **Financial support**
- **Technical experiences and personal behavior**
- **Political factors (administrative and financial corruption)**







Important recommendations

- The international organizations should have a greater role to enforce the governments of the third world countries to set strict rules to improve the EHS and to adhere to the international standards
- The donations of the international organizations to the third world countries should be under strict control to guard against their misuse

New initiatives for expansion of the program

- As the program aims to enable professional scientists from developing countries to receive experiences and knowledge on health, safety and environmental protection in chemical research and production, and to act as regional experts in this field in their home countries. The trainee should play a role to expand the program to their geographical regions. The situation in many Arab countries is similar to the present situation in Egypt.

- The IUPAC or UNESCO should initiate such regional programs via contacting the authorities in the countries to explain the benefits and importance of the program
- The trainee may act as mediators between the IUPAC or UNESCO and the authorities in the countries in their regions
- A regional training programs may be started in these countries, the trainee will have a major role in such programs



Suggested Counterparts

- **The Arab Nations Organization**
- **Arab Regional Funds as the Arab Fund for Social & Economic Development (Kuwait) and The Islamic Development Bank (Saudi Arabia)**
- **Regional Non-Governmental Organizations**

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