



University : University of Babylon  
Country : Iraq  
Web Address : <http://www.uobabylon.edu.iq/>

## Inorganic Waste Treatment



Main Campus, the University of Babylon



Campus of Medical Colleges, the University of Babylon



Al-Musayyaib Campus, University of Babylon



Campus of Medical Colleges, the University of Babylon



Campus of Medical Colleges, the University of Babylon



Inorganic Waste (electronic equipment waste) Treatment (University of Babylon, Iraq)



Paper waste treatment

Inorganic waste treatment in the university of babylon recycling advantagous parts of mechanical equipments, electronic equipment, battery and other inorganic waste to recover metals and precious parts through several departments, including the engineering dipartment and the maintanance department of theUuniversity of Babylon. The rest of the inorganic waste is taken off campus to a dump site that provided by the local government of Babylon City.

Furthermore, the university sponsoring several annual events including:

1. Organizing and sponsoring annual national conference held by pioneers professors in chemistry, biology and other relevant specializations. C.B.R.S.S.D was launched in 2015 and onwards.
2. Organizing international regular conference held by the center of environmental researches and studies, where its articles publish in different certified journals under Scopus.
3. Calling scholars to submit their ideas as programs of waste treatment.
4. Annual issuing and updating guides for safety and security.
5. Holding workshops for educating campus population to protect the environment.

## **Biological waste management program**

**Biohazard:** Any bacteria, recombinant DNA, synthetic DNA, recombinant (genetically modified) organisms, fungi, viruses, rickettsia, chlamydiae, parasites, allergens, viroids, virions, and prions that can be harmful to humans, animals, plants, or the environment.

**Biosafety Level:** The level of containment, on a scale of BSL-1 to BSL-4, under which the biohazard can be safely handled. As the biosafety level raises, the standards for laboratory practices, equipment, and facilities increase. The containment levels for animals housed in biosafety laboratories are called animal biosafety levels (ABSL).

**Biohazardous Waste:** Cultures, stocks, sharps, PPE, or any other item contaminated with a biohazard or pathological waste, including blood, body fluids, and animal or human tissues, excludes teeth and fixed tissues.

**Sharps** – needles, scalpels, pipette tips, biopsy punches, disposable surgical instruments, razor blades, capillary tubes, or any other item that could cause wounding to personnel, or punctures of soft sided disposal, storage, or container(s).

This program applies to Biosafety level 2 and lower laboratories that produce biohazardous waste, including biohazardous sharps waste.

This program ensures compliance with institutional and national mandates for the handling of biohazardous waste and biohazardous sharps.

### **Procedures - Decontamination**

All biohazardous waste must be properly decontaminated prior to disposal

#### **A. Biohazardous liquid waste**

##### **Method 1:**

- a) Add appropriate disinfectant for contact time, as specified in your laboratory specific biosafety manual
- b) Once contact time is completed, dispose of by pouring down the drain to sanitary sewer, or in accordance with disinfectant requirements

##### **Method 2:**

- a) Autoclave on liquid cycle, using the laboratory specific biosafety manual to determine appropriate temperature and time of cycle

b) Prior to autoclaving, container of biohazardous liquid must be labeled a biohazard, autoclave tape must be applied to container, and it must be placed in a secondary, autoclavable, high-walled, leak proof container to avoid overflow of biohazardous materials into autoclave.

c) After autoclaving, allow to cool, and use heat resistant gloves to remove the containers from autoclave

d) After decontamination is complete, dispose of by pouring down the drain to sanitary sewer

### **B. Biohazardous solid waste**

1. Place in leak-proof autoclavable biohazard bag that is clearly labeled with the universal biohazard symbol

2. Autoclave or incinerate, as indicated for the agent and specified in the lab specific biosafety manual

a) Prior to autoclaving, place an “x” in autoclave indicator tape over the universal biohazard symbol

b) After autoclaving, place biohazard bag into a black trash bag, and seal prior to disposal

c) Laboratory staff immediately disposes of properly bagged waste in the standard waste stream (e.g. dumpster).

### **C. Biohazardous sharps waste**

1. Place in hard-walled, puncture resistant, leak-proof, sealable container that is clearly labeled with the biohazard symbol.

Note: Sharps containers are single use containers and should not be emptied and reused.

2. Autoclave or incinerate, as indicated for the agent and specified in the lab specific biosafety manual

a) Prior to autoclaving, place an “x” in autoclave indicator tape over the universal biohazard symbol, or over the sharps label

b) After autoclaving, place biohazard container into a cardboard box, seal well with tape, and label box as “decontaminated sharps”



c) Laboratory staff immediately disposes of properly labeled and well-sealed box in the standard waste stream (e.g. dumpster)

For more information please visit our websites

<http://en.cbr.conference.uobabylon.edu.iq/>

<http://cbrssd.uobabylon.edu.iq/>

The screenshot shows the website for the Chemical, Biological, Radiological, and Nuclear Safety & Security Department (C.B.R.N.S.S.D.) at the University of Babylon. The page features a navigation menu with options like Home, Conference objectives, Preparation committee, and Scientific committee. A sidebar on the left lists various conference-related items such as 'ABOUT THE CONFERENCE', 'CONDITIONS OF PUBLICATION', and 'FORM OF PARTICIPATION'. The main content area includes a large graphic with three hexagons representing water, radiation, and biology, and a map of Iraq. Text on the page describes the 'The Third National CB Security Coordination Conference', stating it will provide a forum for discussing national efforts to reduce risks of hazardous materials. Contact information and a registration notice are also present.

There are chemical organic waste treatments and nonchemical organic waste treatments. For first one, there is a guideline from university to all departments which use chemicals that should splitting organic waste to solid and liquid, also use different container to separate liquid waste into flammable or chloronated . In some cases we can recycle solvents. For second one there is no treatment for nonchemical organic waste.

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Intensive efforts and regular meetings with the Ministry of Environment for environment protection, A cooperation project launched by the University of Babylon



A specialized workshop by College of Science to intensify academic efforts in collaboration with CSP for Biological, Chemical, Nuclear and Radiological Safety and Security launched in 2015 and regularly seasonal held



The Sixth International Conference for Environmental Sciences 2015 organized by University of Babylon, the Research Center of Environmental Studies, an annual regular event



The Sixth International Conference for Environmental Sciences 2015 held by University of Babylon, the Research Center of Environmental Sciences, one of the halls



The Second National Coordination Conference



for Biological, Chemical, Nuclear and Radiological Safety and Security (CBRNSS) April 2017, It is a annual regular event



The Third International Biological, Chemical, Nuclear and Radiological Safety and Security CBRNSS Coordination Conference April 2018, It is a regular annual event



Main hall of CBRNSS, 2018



Attendance Minister of Higher Education and Scientific Research to open International Conference of CBRN 2018



University of Babylon Word



The Third National Biological, Chemical, Nuclear and Radiological Safety and Security Coordination Conference (CBRNSS) April 2018, It is an annual regular event; the front page event folder 2018



Regular annual conference for CBRN Safety and Security; the back page event folder 2018





University of Babylon opening word of CBRNSS, 2018



One of the Conference halls, 2018



Prof. Dr. Falah AlKhafaji , the general secretary of the conference, one of the University of Babylon Scientists



The Fourth National Biological, Chemical, Nuclear and Radiological Safety and Security Coordination Conference (CBRNSS) April 2019,  
It is an annual regular event orgnized by University of babylon

**Ministry of Higher Education and Scientific Research**

**University of Babylon, IRAQ**

**University Waste**  
**Sorting and Recycling Program**  
**2019**

## **Reasons for launching the program:**

- Applying scientific and academic facts on reality in order to reduce pollution resulting from all types of waste
- The deteriorating situation as a result of the random dumping of waste throughout the province of Babylon
- Setting a clean university environment and taking off to the regions outside the campus.
- Educating the community ornaments

## **What is the program?**

- Manufacturing the containers of classified containers for sorting waste according to their categories, taking into consideration the presence of signs indicating the type of waste.



- Regular Distributing on the campus in specific places
- Using these containers by the campus population



## **Requirements of Implementation program of sorting and recycling waste at the University of Babylon**

Referring to the margin of the esteemed President of the University on 12/3/2019 on the origin of the proposals submitted by a working group (implementation of the program of sorting and recycling waste in our university). We list the requirements for the above program, which were approved by the University Council on 25/2/2019. These requirements included the following activities to be fulfilled:

1. Deanships of colleges shall issue a book containing the formation of sub-committees, which shall determine the number of members thereof, not exceeding three persons whose role shall be:

- Implementation of the program in the college.
- Supervision - maintenance - cleanliness - maintenance.
- Prevent the hash of container contents.

2. Structures selected by the Central Committee (Waste Sorting Task Team) are implemented by the faculties and as an interconnected facility.

3. Containers are manufactured for the structure outside the college buildings according to the dimensions shown in the specifications as follows:

(75cm-220cm-100cm) (Measurements are negotiable according to actual need).

4. Containers are manufactured for the structure inside the college buildings according to the dimensions shown in the specifications as follows:

(50cm-160cm-80cm) (measurements are negotiable according to actual need).

5. All cafeterias in each faculty should carry out the waste sorting program, with the purchase of a device that converts the residues of the sorted food into fertilizer provided that the Government Contracts Division and the Legal Department to include this requirement in the cafeteria lease contract.

6. Issuing a directive from the office of the scientific assistant to the agriculture division in the university for the purpose of benefiting from the fertilizer produced in fertilizing the soil of the university.
7. The location of the containers inside and outside the buildings shall be determined in agreement with the Central Committee, provided that this shall be adhered to by the Sub-Committee at the College.
8. A monthly periodic report shall be submitted to the Central Committee by the Chairman of the Sub-Committee after briefing the Dean of the concerned faculty, which includes (maintenance, maintenance, cleanliness and treatment of the program problems of the amounts generated per month of waste). Has been accomplished.
9. Fixed and uniform design of colors and marks to be applied to containers and all colleges.
10. Deans offices in each faculty to print posters and information leaflets about the program and placed inside and outside the faculties, with instructions to colleges to identify a volunteer team of students headed by the Central and sub-committee to distribute posters or leaflets to the students of each faculty to identify and succeed the program.
11. An official letter will be issued by the offices of the Deans including the formation of a volunteer team with the names of the Central Committee team and the sub-committee team with the names of the students for each faculty
12. Colleges publish updates regarding the waste sorting program on the college website and notify the university site of news and pictures.
13. The colleges should implement the proposal of the team to install a large container considered as an implicit project to collect clothes, shoes, toys ((used)), to be donated to the needy families as in the figure below and be permanent and choose a place to install this container.

The University Presidency, in coordination with the Government Contracts Division, will summon the companies for the purpose of identifying the University's conditions for waste disposal and for documenting dealing with external entities for the purpose of raising or recycling waste.

## **Activities and Events fulfilled on Program of University Waste till October 2019**

- [Educating campus population through the University Day April 2019,](#)  
for more information please visit::  
<http://lerc.uobabylon.edu.iq/article.aspx?lng=ar&envid=51961>
- A place for sorting waste, for more information please visit::  
<http://lerc.uobabylon.edu.iq/article.aspx?lng=ar&envid=51963>
- Activities done by the Program Central Committee for more information please visit::  
<http://lerc.uobabylon.edu.iq/article.aspx?lng=ar&envid=51935>
- A workshop at the College of Engineering al-Mussayaib done by the Program Central Committee for more information please visit::  
<http://lerc.uobabylon.edu.iq/article.aspx?lng=ar&envid=52031>
- Setting up a questionnaire form 2019 about the campus environment and publishing it to the all population; for more information please visit::  
<https://docs.google.com/forms/d/e/1FAIpQLSeylLyFuusKFciqFk5G9ALZvGBoXC5fMlrRYft89eIC5eYpRg/closedform>
- A field visit of Program Central Committee to the Faculty of Arts for educating for the program, for more information please visit::  
<http://lerc.uobabylon.edu.iq/article.aspx?lng=ar&envid=52027>
- A field visit of Program Central Committee Factory of Sugar,  
<http://lerc.uobabylon.edu.iq/article.aspx?lng=ar&envid=52026>



- Specifying the place for waste sorting and recycling program at the University of Babylon and setting the first building blocks for its implementation, for more information please visit::

<http://lerc.uobabylon.edu.iq/article.aspx?lng=ar&envid=51963>

- Participation of the Program Central Committee for the sorting and recycling of waste within the activities of the University Day

<http://lerc.uobabylon.edu.iq/article.aspx?lng=ar&envid=51961>

- More details on the program of Waste sorting and recycling program at Babylon University

<http://lerc.uobabylon.edu.iq/announce.aspx?lng=ar&envid=52029>

- A workshop to discuss the questionnaire of the UI GreenMetric 2019 at

<http://lerc.uobabylon.edu.iq/article.aspx?lng=ar&envid=52034>

- A workshop for UI-GreenMetric especially on weighting the criteria:

<http://lerc.uobabylon.edu.iq/article.aspx?lng=ar&envid=52033>

- UI GreenMetric(workshop)

<http://lerc.uobabylon.edu.iq/article.aspx?lng=ar&envid=52013>

- For more information please visit our websites <http://en.cbr.conference.uobabylon.edu.iq/>  
<http://cbrssd.uobabylon.edu.iq/>