

# Detecting the Quality of Drinking Water in the Province and around Khurma

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**ABSTRACT:** In this research has been gathering a number of water samples from a variety of sources, including ( home - Mosque - hospitals - schools - Wells ) organization for six weeks and three periods Alghreef, khurma and zoulm to examine the quality of this water found that there is a large number of the total samples from negative bacteria Gram negative bacteria brews للاكتوز which give an indication of the water pollution microbiological and found that of microbiological examination of many samples the pollution rate increased from 58.82 % of total samples.

## Introduction



Contaminated water With Iron Station

Water pollution is any change physicist, chemical or in water quality, directly or indirectly, negatively affect the living organisms, or makes the water not valid required uses. And affects water pollution had a great impact on the life of the individual, the family and the community, water is a vital demand to humans and other living organisms, water may be a major reason for the termination of life on the ground if contaminated.

Divided into the water pollution to the two main types, the first is the natural pollution, and shows the change in water temperature, or increase make it less salty, or increasing the outstanding articles. The other type is the chemical pollution, and multiple forms of water pollution exchange rates and oil pollution of agricultural residues such as pesticides and fertilizers.

Take the water pollution different forms, and thus a plurality of the concepts of water pollution. It can be defined as the damage or corruption of the quality of the water, leading to a failure in its (environment), thereby reducing their ability to perform their natural role and makes them harmful when used, or losing a lot of economic value, and in particular, with regard to the 'its own fish and other aquatic organisms. Also known as the water pollution that the desecration of the downstream and oceans and the Great Lakes region, as well as to the rain water wells and water and Groundwater, which makes its territorial waters to handle and usable, whether humans or animals or animal, plant and other aquatic organisms.

And some other solutions to address this pollution:

- The speed of sewage treatment before the arrival of the soil or bodies of water, which can be re-used again in agricultural land. But without soil pollution eaten by humans and animals.
- Get rid of the shipping activity and what has happened from the oil spill in the waters of the Sea - or navigational rivers - through incineration or suction position.
- An attempt of radioactive wastes in some specific deserts, because they leak and threaten the safety of groundwater.
- The imposition of security precautions widely in order to maintain the integrity of the subterranean water as a source of drinking water sources, the prevention of agriculture or construction or do any industrial activity may harm the safety of water.

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Published at: <http://www.ijsciences.com/pub/issue/2017-06/>

DOI: 10.18483/ijSci.1315; Online ISSN: 2305-3925; Print ISSN: 2410-4477



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- An attempt to recycle some factory waste instead of dumping in banks and their access to the groundwater reciprocity as long as there is no harm in re-used again.
- Periodic analysis of chemical and vital water by specialized laboratories, to ensure that the standards achieved by the quality of water and pollution.
- Reduce air pollution, which contributes to water pollution of rain, into acid water raises many interrelated problems. Is the availability of human awareness which believes in the necessity of the Governorate of water pollution.

#### The aim of the Search:

Tests a bio micro to reveal the extent of the quality of the water used for drinking purposes in the governorate of Alghreef, khurma and zoulm.

#### Methods and tools

##### A. Collecting Samples:

Been collecting samples from different sources on the six weeks three periods from sources (taps houses - reservoirs of buildings in the upper and lower outlets . Hospitals - mosques - schools) Alghreef, khurma and zoulm. .

##### B. Microbiological examination:

Been to use the environment of Macauny to what extend worse still to detect The presence of Asheer koulaie of bacterial isolation refer to the negative bacteria brews group of.

#### Results and discussion

Table (1). Negative bacteria isolated from water samples in the first week:

Sample number	Place negative bacteria	Negative bacteria	Negative bacteria fermented for lactose
1	Ground Reservoir	120	4
2	Al - Kharama Mosque	156	15
3	Main tank	34	Nil
4	hospital	26	9
5	Wells	16	Nil

Table (2). Bacteria isolated from water samples in the second week:

Sample number	Place negative bacteria	Negative bacteria	Negative bacteria fermented for lactose
1	Ground Reservoir	120	4
2	Al - Kharama Mosque	156	15
3	Main tank	34	Nil
4	hospital	26	9
5	Home	16	Nil



Picture 1: the bacterial isolates and fermented describes Winery for lactose in one water samples.



**Picture 2** bacterial isolates and fermented describes Winery of lactose on a water samples.

**Table 3** negative bacteria isolated from water samples in the sixth week.

Negative bacteria fermented for lactose	Negative bacteria	Place the sample	Sample number
Nil	320	Ground reservoir	11.
Nil	8.	Masjid khurma	12.
2.	6.	Main tank	13.
Nil	1404	Hospital	14.
1.	14.	Zaleem mosque	15.
2.	46	Menzel	16.
1.	58	Wells	17.

Pollution = number of contaminated samples ÷ total number x 100

Pollution =  $10 \div 17 \times 100 = 85.82\%$

Study of the quality of water intended for drinking walzolim walghariv where khurma area gathers 17 water samples from the upper reservoirs and ground for a number of mosques, houses and hospitals found that there are a large number of total samples of negative bacteria gram negative bacteria and fermented to lactose to many demos that increased pollution of 58.82% of agkali number of samples.

**Accordingly, the study recommends:**

1. The need for water treatment almikrobiologeh hand until you get rid of microbial contaminants.
2. Use effective disinfectant in proportions adequate to eliminate harmful microbial isolates.
3. Be sure and check the maintenance General network pipes for drinking water and remoteness from drainage pipes.
4. Awareness programmes on the foundations of quality drinking water to prevent the dangers of the use of contaminated water.
5. Good follow up to officials to cabinets for public water.