

Comparative Microbiological Study on Zamzam Water, Zamzam with Ruqyah and Mineral Water

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Abstract

Water from heavenly Zam Zam is devoured by numerous Muslims on the planet because of its useful job for the wellbeing of people. The Prophet peace and blessings of Allah be upon him) said: "The best water on the face of the earth is the water of Zam Zam; it is a kind of food and a healing from sickness.". The current investigation was completed to assess the near antimicrobial adequacy of Zam Zam water, Zam Zam connected with Quran (Ruqyah) and three standard mineral water against some pathogenic microorganisms notwithstanding investigation of its microbial substance. The antimicrobial action Zam Zam water, Zam Zam appended with Quran (Ruqyah) and three conventional mineral water inspected against five pathogenic microorganisms (*Escherichia coli*, *Staphylococcus aureus*, *Pseudomonas eurogenes*, *Bacillus spp.* and *Candida albicans strain*). The outcomes uncovered that all samples of mineral water, Zam Zam water and Zam Zam water with Ruqyah were liberated from microbial tainting on nutrient agar yet when presented to air pollution the substantial microbial development had from mineral water followed by Zam Zam water and the microbial development become extremely low when debased Zam Zam water read Ruqyah on it notwithstanding the most elevated antimicrobial hugeness had from Zam Zam water with Ruqyah against all analyzed microorganisms followed by Zam Zam water alone anyway mineral water has no impact against all inspected pathogens. So it could be inferred that Zam Zam water particularly with Ruqyah (Quran) may give more secure elective regular antimicrobial against microbes. This methodology is utilized effectively for travelers on Hajj and Umrah specifically, and for all Muslims all in general.

INTRODUCTION

Microorganisms are the most well-known reason for irresistible infections which take an interest in about portion of the passing in human. Just as grimness and mortality because of loose bowels in many creating nations which go about as a significant issue, The diseases because of assortment of bacterial etiologic operators, for example, pathogenic *Escherichia coli* (*E. coli*), *Salmonella spp.*, and *Staphylococcus aureus* (*S. aureus*) are generally normal. (Parastoo Karimi Alavijeh et.al. 2012) Also fundamental fungal diseases because of *Candida albicans* (*C.albicans*) have risen as significant reasons for bleakness and mortality (Pidcock K.J.V. and R. Wise, 1989)

Antibiotic resistance has become a worldwide concern. As antibiotic resistance safe microorganism generally influence the clinical adequacy of many existing antibiotic (Singh M. et al.1992) Water is one of the primary dietary segments.

Its quality assumes significant job for the soundness of person. Zam Zam water is normal water devoured by a huge number of Muslims worldwide (Madain Project 2020). Zam Zam water is extraordinary in its character when contrasted with other water. There are neither microscopic organisms nor molds that caused changes in smell and taste (*Saudi Geological Survey 2014*). Zam Zam water has no indications of organic growth. Artificially Zam Zam water is very reasonable for drinking purposes (*Mahmoud Isma'il Shil 2008*).The Prophet (peace and blessings of Allah be upon him) said: "The best water on the face of the earth is the water of Zam Zam; it is a kind of food and a healing from sickness." (Saheeh al-Jaami', 3302)

This water has been accounted for to be soluble and furthermore plentiful in minerals which render it a potential cell reinforcement source (Sahih Muslim Book 001, *Kazmi, Aftab 2011*). The basic idea of Zam Zam is related with the wealth with specific components like magnesium⁶. Other

than Zam Zam water has shown that it is sodium chloride water and of meteoritic nature. The four harmful components arsenic (AS), cadmium (Cd), lead (Pb) and selenium (Se) are not exactly the threat level of human utilization. Zam Zam water contains fluorides that have a successful germicidal action (Alfadul *et al.* 2011). The Quran was orally revealed by God to the final prophet, Muhammad, through the archangel Gabriel (*Jibril*) (Lambert, Gray, 2013). As Allah said in quraan (Wanunazzilu mina alqurani ma huwa shifaon warahmatun lilmumineena wala yazeedu alththalimeena illa khasaran) (82 Al-Isra) that mean in english (We send down (stage by stage) in the Quran that which is a healing and a mercy to those who believe: to the unjust it causes nothing but loss after loss).

The Quran offers perfect solace to a believer - both spiritually and physically. Ruqyah' is the practice of treating illnesses through Qur'anic āyāt and invocations as prescribed by the Messenger of Allah (peace and blessings of Allah be upon him). It provides a cure for evil eye, magic and physical ailments. Ruqyah should therefore play an essential role in our lives. Allah (peace and blessings of Allah be upon him) says: "And say: The truth has come, and falsehood has vanished. Surely falsehood is ever bound to vanish by its very nature. And we send down in the Quran that which is a cure and a mercy for the believers." As well providing a

cure, Ruqyah is an excellent way for the believers to build their Imān and reaffirm their tawhīd for Allah (peace and blessings of Allah be upon him). Indeed seeking treatment through the Quran demonstrates complete belief in the Book of Allah (peace and blessings of Allah be upon him). The Messenger of Allah (peace and blessings of Allah be upon him) said: "Make good use of the two cures: honey and the Quran." (Ibn Mājah) 'Ā'ishah said: "When the Messenger of Allah (peace and blessings of Allah be upon him) was ill, Jibrīl performed Ruqyah on him." (Muslim)

In light of the previously mentioned discoveries the current investigation was done to assess the near antimicrobial viability of Zam Zam water, Zam Zam connected with Quran (Ruqyah) and three conventional mineral water against some pathogenic microorganisms notwithstanding investigation of its microbial substance.

MATERIALS AND METHODS

The study was carried out in the following phases:

Phase I:

Zam Zam water was obtained from Makkah, Saudi Arabia which treated with Ultraviolet irradiation, used as it is and after read Ruqyah (Quran) on it, The mineral water obtained from local market in Al Quwai'yah, Saudi Arabia



Figure 1: Zam Zam water entering the well from the stony horizon (Careem 2005).



Figure 2: Monitoring Ultraviolet irradiation for deactivating bacteria in Zam Zam water (Careem 2005).

Phase II:

A loop full from each water sample streaked on nutrient agar plate incubated at 37°C for 48-72hr for examination of its microbial content.

Phase III:

Microbial culture the micro-organisms used for antibacterial activity were *E.coli*, *Staphylococcus aureus*, *Pseudomonas aeruginosa*, *Bacillus spp* and *Candida albicans* strain for antifungal activity.

Phase IV:

Antimicrobial activity of water samples. The antibacterial test was performed using the agar-well diffusion method (Cheesbrough, M 2000) The Muller Hinton agar was

prepared and left to cool at 45 °C. Agar plates were prepared using sterile nutrient agar. The bacterial inoculum was evenly spread onto the surface of the agar plates using a sterile cotton swab. Wells were punched in the plates using a sterile stainless steel borer. Test samples were added to each well. Diffusion of the test sample was allowed at room temperature for 30 minutes. The agar plates were then incubated at 37°C for 24 hr for bacterial samples and 25°C for 24 hr *Candida albicans*. The anti-microbial activity was measured by the inhibition zones produced in millimeter. All trials were copied. Ciprofloxacin and penicillin (10 µg) utilized as antibacterial positive control, Nystatin (10 µg) utilized as antifungal positive control while distilled water (100 µg) utilized as negative control for antibacterial screening.

RESULTS

Table 1: The microbial growth of mineral water, Zam Zam water and Zam Zam water with Ruqyah (Quran) on nutrient agar

Type of specimens	Mineral water	Zam Zam water	Zam Zam water with Ruqyah
Microbial growth on nutrient agar	-	-	-

(+++)=heavy microbial growth / (-) = free microbial growth

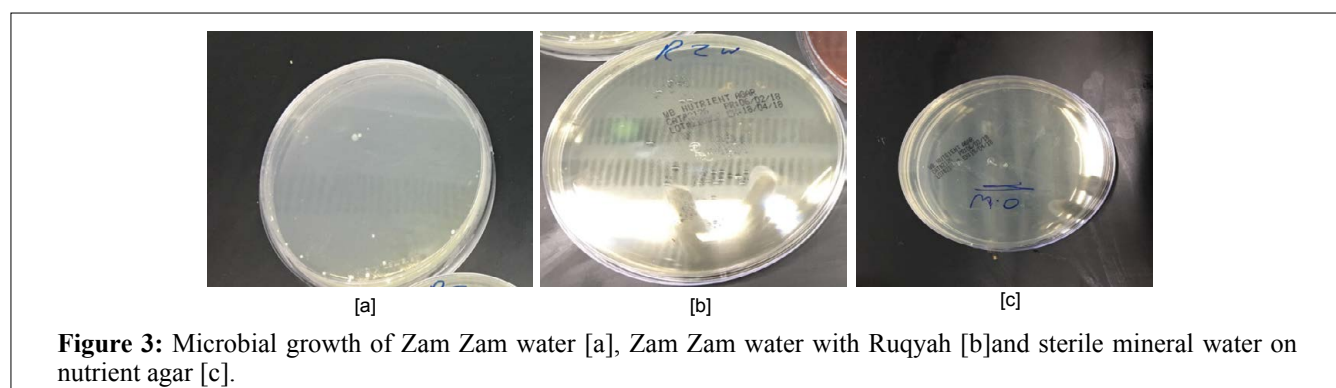


Figure 3: Microbial growth of Zam Zam water [a], Zam Zam water with Ruqyah [b] and sterile mineral water on nutrient agar [c].

As shown in table 1 and fig 3 all examined samples of mineral water, Zam Zam water and Zam Zam water with Ruqyah (Quran) on nutrient agar were free from any microbial growth.

Table 2: The microbial growth of mineral water, Zam Zam water and Zam Zam water with Ruqyah (Quran) on nutrient agar.

Type of specimens	Zam Zam water	Zam Zam water with Ruqyah
Microbial growth on nutrient agar	+++	+

(+++)=heavy microbial growth / (-) = free microbial growth

Table (2) revealed that when the specimen of Zam Zam water exposed to air contamination the microbial growth possessed it become very low after reading Ruqyah (Quran) on it which was clarified also in Fig (4).

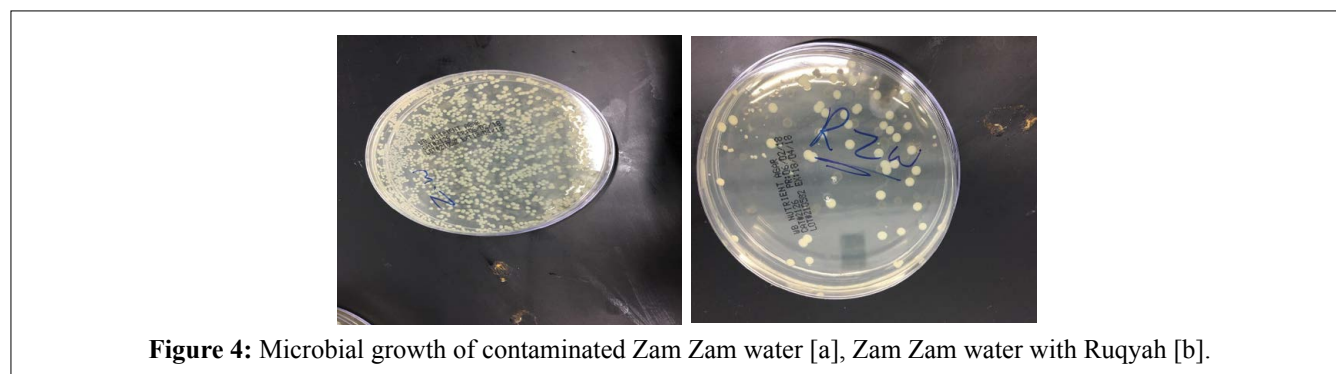


Figure 4: Microbial growth of contaminated Zam Zam water [a], Zam Zam water with Ruqyah [b].

Table 3: Antimicrobial activity of mineral water, Zam Zam water and Zam Zam water with Ruqyah against some pathogens in (mm).

Type of extract type of microorganisms	Mineral water	Zam Zam water	Zam Zam water with Ruqyah	Penicillin Control +ve	Ciprofloxacin Control +ve	Nystatin Control +ve	Distilled water Control -ve
<i>S.aureus</i>	0	8	9	11	28	0	0
<i>E.coli</i>	0	7	8	0	02	0	0
<i>C.albican</i>	0	11	13	0	0	16	0
<i>Bacillus</i>	0	11	12	10	11	0	0
<i>Pseudomonas</i>	0	6	7	2	11	0	0

Table (3) revealed that the highest antimicrobial significance possessed from Zam Zam water with Ruqyah against all examined pathogens followed by Zam Zam water alone however mineral water has no effect against all examined pathogens.

DISCUSSION

Water sullyng is of specific worry in emergency clinics, where consumable water in sinks, showers, latrines, dialysis water, ice and ice machine, water showers, and so forth., has been seen as a source and repository of microorganisms, and control rehearses are coordinated to intrude on their transmission to the patient .However, outside medical clinics, people are exposed to numerous other, rather uncontrolled, wellsprings of pathogenic microscopic organisms. Some social exercises including the utilization of water are likewise expected wellsprings of pathogenic microscopic organisms. The microbiology of these waters is less known and once in a while contemplated, however ought to be viewed as meriting unique intrigue; due to its high pathogenic potential (Rutala. et al. 1997)

Zam Zam is the name of a celebrated well in al-Masjid al-Haraam (the Sacred Mosque in Makkah), which is thirty-eight cubits (a unit of length) away from the Ka'bah. It is suggested for explorers on Hajj and Umrah specifically, and for all Muslims as a rule, to drink Zam Zam water. As indicated by a discussion by Prophet Mohammed concerning the water of Zam Zam, "It is a gift; it is food and a remedy for the debilitated". Drinking Zam Zam water implies that an individual can be recuperated when drinks it with confidence and truthfulness (Imam Muslim, 2473) (Hussain et al. 2010)

The present study was carried out to evaluate the comparative antimicrobial efficacy of Zam Zam water, Zam Zam attached with Quran (Ruqyah) and three ordinary mineral water against some pathogenic microbes in addition to study of its microbial content. The antimicrobial activity Zam Zam water, Zam Zam attached with Quran (Ruqyah) and three ordinary mineral water examined against five pathogenic microbes(*E.coli*, *Staphylococcus aureus*, *Pseudomonas eurogenes*, *Bacillus spp* .and *Candida albicans* strain.the results revealed that all spemins of mineral water, Zam Zam water and Zam Zam water with Ruqyah were free from microbial contamination on nutrient agar (Table 1, Fig 3) but when exposed to air contamination the microbial growth possessed from Zam Zam water become very low reading Quran (Ruqyah) on it (Table2, Fig 4) in addition to the highest antimicrobial significance possessed from Zam Zam water with Ruqyah against all examined pathogens followed by

Zam Zam water alone however mineral water has no effect against all examined pathogens (Table 4).

The substance of Zam Zam water incorporates fluorides that have a compelling germicidal activity. Further, organisms can't make due in it, which implies that Zam Zam water jelly its taste and is certifiably not an amicable situation for microscopic organisms. The foundation of the Custodian likewise inspected the degree of immaculateness of Zam Zam water and found that it has a superb physical make-up that makes it unique in relation to other drinkable fluids since it is normally sterile that has no germs in it (Koshak, Y. H.1983). Water as a rule is considered as mineral and thusly, sells best if the pace of minerals there in is from 150 to 350 mg/liter. Concerning Zam Zam water, the pace of minerals is 2000 mg/liter (Nour Al Zuhair, et al 2010) The most noteworthy minerals in Zam Zam water are; calcium, sodium, magnesium and potassium. Zam Zam water is considered as the most extravagant of all waters on the planet in calcium.

The pace of calcium in Zam Zam water is 200 mg/liter (The yearly report of the service of agribusiness and water assets, 1971). What's more, Zam Zam water is considered as stomach related, the pace of bi-carbonates is 366 mgs/ liter as contrasted and the most acclaimed mineral water in France, in which the pace of bi-Carbonates is 357 mgs/ liter (Nabulsi, B. 2007).. Zam Zam water has never been artificially rewarded or chlorinated as for the situation with water siphoned into the urban communities. Its hydrogen segment is 7.5, showing that it is antacid somewhat In the wake of coordinating up the synthetic investigation to the particulars of the World Health Organization, results demonstrated the valuable impact of Zam Zam water on the body (World Health Organization 1984). Moreover, Zam Zam water contains elevated level of sodium evaluated as 133mg/L (Koshak, Y. H.1983). Dry climate makes Zam Zam progressively saline through vanishing, which is viewed as useful for the human body (Zam Zam Studies and Research Centre 2005).

One of the most broadened social exercises basic in Makkah during the sacred month of Ramadan, is the utilization of Sabil water gadgets, for example, drinking fountain to offer drinking water close to a large portion of the mosques. Moreover for the Messenger (peace and blessings of Allaah

be upon him) recited Ruqyah for himself, and some of his companions recited Ruqyah for themselves

It was narrated that 'Aa'ishah (may Allaah be pleased with her) said: When the Messenger of Allaah (peace and blessings of Allaah be upon him) was ill, he would recite al-Mi'wadhatayn over himself and spit drily. When his pain grew intense, I recited over him and wiped him with his own hand, seeking its barakah (blessing)."Narrated by al-Bukhaari, 4728; Muslim, 2192"

CONCLUSIONS

Zam Zam water especially with ruqyah (Quran) may provide safer alternative natural antimicrobial against pathogens. This approach is used successfully for pilgrims on Hajj and Umrah in particular, and for all Muslims in general.

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