Antibacterial Activity of Quince (*Cydonia oblonga Miller*) Extracts Against Some Pathogens Isolated from Laryngitis

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Received: 4/8/2024
Accepted: 13/1/2025
Online: 27/4/2026

ABSTRACT

Background: Antimicrobial resistance has emerged as a major global health challenge, prompting the search for novel antimicrobial agents. Natural products, including quince (*Cydonia oblonga* Miller), are rich in bioactive compounds with potential therapeutic properties. **Objective:** To evaluate the antibacterial activity of aqueous and ethanolic extracts of quince fruit against pathogenic bacteria isolated from patients with laryngitis. **Methods:** Swab samples were collected from patients with laryngitis and cultured on selective media to isolate Gram-positive and Gram-negative bacteria. Isolates were identified using the VITEK system. Quince fruit extracts (aqueous and ethanolic) were prepared at concentrations of 25, 50, and 75 mg/mL and tested for antibacterial activity using the agar well diffusion method. **Results:** The predominant isolates included *Staphylococcus aureus*, *Escherichia coli*, and *Pseudomonas aeruginosa*. The ethanolic extract demonstrated the highest antibacterial activity, particularly against *S. aureus* (12 mm inhibition zone), followed by *E. coli* (9 mm) and *P. aeruginosa* (8 mm). The aqueous extract exhibited comparatively lower activity but followed the same sensitivity pattern. **Conclusion:** Quince fruit extracts exhibit notable antibacterial activity, with ethanolic extracts showing superior efficacy. These findings suggest potential applications in antimicrobial therapy and food preservation.

Keywords:antibacterial activity; *Cydonia oblonga*; laryngitis; plant extracts; antimicrobial resistance.
https://doi.org/10.24126/jobrc.2026.20.1.884

INTRODUCTION

Antimicrobial resistance (AMR) is a major global health concern, defined as the ability of microorganisms to resist antimicrobial agents to which they were previously susceptible (1,2). This resistance arises primarily through genetic mutations and is further exacerbated by the misuse and overuse of antimicrobial drugs (1–3). Consequently, resistant infections are increasingly difficult to treat and often require higher medication doses, which may be less effective, more toxic, and more costly (3). AMR poses serious public health challenges and necessitates the development of novel antimicrobial agents and alternative therapeutic strategies (4).

Natural products, particularly those derived from fruits and vegetables, have attracted considerable attention due to their therapeutic properties in treating infectious diseases (5,6). Numerous bacterial genera and species contribute to infections, often through biofilm formation, which confers increased resistance to conventional antibiotic therapies (5). As pathogenic bacteria become increasingly resistant to antibiotics due to inappropriate antimicrobial use and associated adverse effects, there has been a shift toward traditional and herbal medicines (6). These alternatives are favored for their availability, cost-effectiveness, and minimal side effects (6).

Quince (*Cydonia oblonga* Miller), a member of the Rosaceae family, is one of the earliest cultivated fruit species (7). It originated in Central Asia and subsequently spread to various regions worldwide (7). The fruit is characterized by its golden-yellow color, fleshy texture, and rich aroma (Figure 1). Although less extensively studied than other fruits, quince has been traditionally used across cultures for its medicinal properties (7,8). It is a valuable nutritional

source containing polyphenolic compounds, phenolic derivatives, flavonoids, and pectin, which contribute to its antibacterial, anti-inflammatory, anticancer, and cardioprotective activities (8,9).

Figure 1. Quince (Cydonia oblonga Miller) fruits (10)

Quince is particularly rich in antioxidant compounds such as phenolic acids, flavonoids, and tannins (7,8). These compounds act as reducing agents, hydrogen donors, and free radical scavengers, thereby protecting cells from oxidative stress (7). Due to these properties, quince and similar natural products have attracted increasing research interest as potential alternative therapeutic agents (6–8).

Laryngitis is an inflammation of the larynx that results in hoarseness or complete loss of voice (10). It may be acute or chronic, depending on its duration. Common symptoms include sore throat, dry cough, difficulty speaking, and a sensation of a lump in the throat (10,11). The condition may be caused by viral, bacterial, or fungal infections, as well as non-infectious factors such as irritant exposure, vocal strain, gastroesophageal reflux disease (GERD), and autoimmune disorders (11,12). Understanding these causative factors is essential for effective prevention and treatment strategies.

The discovery of new antimicrobial agents, particularly from natural sources, has gained significant attention in recent years. These efforts aim to overcome antimicrobial resistance and reduce the adverse effects associated with synthetic antibiotics. Therefore, the present study aims to evaluate the antibacterial activity of aqueous and ethanolic extracts of quince fruit against pathogenic bacteria isolated from laryngitis patients.

Methodology

Sample Collection

Swab samples were collected from 30 patients diagnosed with laryngitis at Hawler Teaching Hospital and Erbil International Hospital (Erbil, Iraq). Participants included both males and females aged 9–20 years. Samples were transported under refrigerated conditions and processed within 24 hours. Swabs were collected from the laryngeal region and cultured for bacterial isolation.

Bacterial Isolation and Identification

Samples were cultured on selective and differential media for the isolation of Gram-positive and Gram-negative bacteria. The isolates were identified using the VITEK 2 system. The predominant bacterial species identified included *Staphylococcus aureus*, *Escherichia coli*, and *Pseudomonas aeruginosa*.

Preparation of Quince Extracts

Fresh quince (*Cydonia oblonga* Miller) fruits were obtained from local markets in Erbil in 2024. The fruits were washed, cut into small pieces, and ground using sterile equipment. The resulting material was filtered through sterile filter paper.

For aqueous extraction, distilled water was added to obtain concentrations of 25%, 50%, and 75% (w/v), and the volume was adjusted to 100 mL. The mixture was heated for 10 min until a viscous extract was obtained, then cooled to room temperature and filtered. For ethanolic extraction, the same procedure was followed using 96% ethanol without heating. The extracts were stored at 4 °C for 24 hours prior to filtration and subsequent analysis.

The extraction approach was based on previously described protocols for plant-derived antimicrobial compounds (13,14).

Antibacterial Activity Assay

The antibacterial activity of the aqueous and ethanolic extracts was evaluated using the agar well diffusion method (14,15). Each extract concentration (25%, 50%, and 75%) was tested against the isolated bacterial strains. Each experiment was performed in five replicates. Inoculated agar plates were incubated at 37 °C for 24 hours. The diameters of inhibition zones were measured in millimeters (mm), and mean values were calculated. Sterile distilled water was used as a negative control, while ampicillin served as a positive control.

Statistical Analysis

Statistical analysis was performed using GraphPad Prism version 9. The Chi-square test was used to compare antibacterial activity among groups. A p-value < 0.05 was considered statistically significant.

Results

Among the bacterial isolates obtained from the collected samples, after excluding samples with no growth and non-target microorganisms, *E. coli* and *P. aeruginosa* accounted for 40% of the isolates, while *S. aureus* represented 60%.

The antibacterial act**i**vity of aqueous and ethanolic quince extracts was evaluated at concentrations of 25%, 50%, and 75% against both Gram-positive and Gram-negative bacteria. The results demonstrated that antibacterial activity varied depending on both the bacterial species and the extraction method. No detectable inhibition zones were observed at concentrations of 25% and 50% for either extract. In contrast, the 75% concentration exhibited measurable antibacterial activity for both extraction types.

The ethanolic extract exhibited greater antibacterial efficacy than the aqueous extract. At 75%, the ethanolic extract produced inhibition zones of 12 mm against *S. aureus*, 9 mm against *E. coli*, and 8 mm against *P. aeruginosa*. In comparison, the aqueous extract at the same concentration produced inhibition zones of 8 mm, 7.5 mm, and 7 mm against *S. aureus*, *E. coli*, and *P. aeruginosa*, respectively (Table 1).

Table 1. Antibacterial activity of quince extracts (mean inhibition zone, mm ± SD, n = 5)

Extraction Type	Concentration	*E. coli*	*P. aeruginosa*	*S. aureus*
Water extract	25%	0 ± 0	0 ± 0	0 ± 0
	50%	0 ± 0	0 ± 0	0 ± 0
	75%	7.5 ± 0.5	7.0 ± 0.4	8.0 ± 0.6
Ethanol extract	25%	0 ± 0	0 ± 0	0 ± 0
	50%	0 ± 0	0 ± 0	0 ± 0
	75%	9.0 ± 0.5	8.0 ± 0.5	12.0 ± 0.7

p = 0.9236 (not significant)

Overall, *S. aureus* demonstrated the highest susceptibility to both extracts, whereas *P. aeruginosa* exhibited the lowest sensitivity. Statistical analysis revealed no significant differences among the tested groups (p = 0.9236), which may be attributed to the limited sample size and number of replicates.

The comparative antibacterial effects of aqueous and ethanolic extracts at 75% concentration are illustrated in (Figure 2).

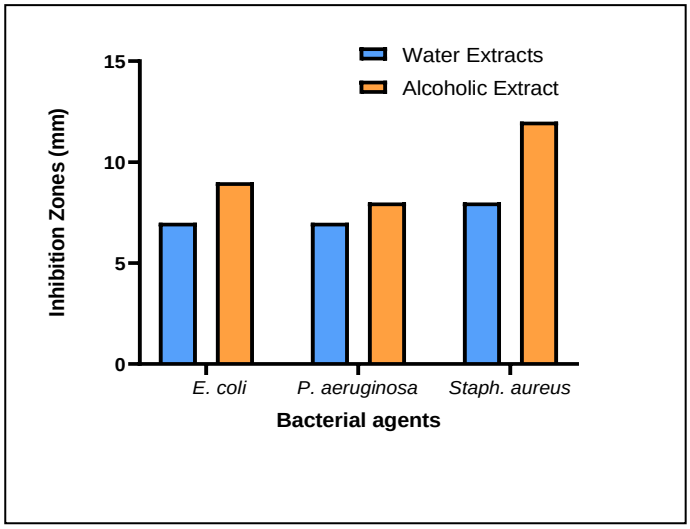

Figure 2. Inhibition zones (mm) at 75% concentration for aqueous and ethanolic extracts against the tested bacteria. Data are presented as mean ± SD (n = 5). No statistically significant differences were observed (p = 0.9236).

Discussion

The present study investigated pathogenic bacteria isolated from patients with laryngitis and evaluated the antibacterial activity of aqueous and ethanolic quince (*Cydonia oblonga* Miller) extracts. Among the bacterial isolates identified were *E. coli* and *P. aeruginosa* (Gram-negative bacteria) and *S. aureus* (Gram-positive bacteria). The presence of these bacterial species in laryngitis has been reported in previous studies. For instance, Kinnari *et al*. identified *S. aureus* and *P. aeruginosa* in patients with chronic laryngitis, while Thomas *et al*. reported similar findings, including *Serratia marcescens* (16,17). These organisms are part of the oropharyngeal flora and may act as opportunistic pathogens under specific conditions (18).

The antimicrobial activity of quince extracts varied depending on both the extraction method and concentration. No detectable antibacterial activity was observed at lower concentrations (25% and 50%), whereas the highest concentration (75%) demonstrated measurable inhibition against all tested bacterial species. The ethanolic extract exhibited greater antibacterial efficacy compared to the aqueous extract. These findings are consistent with previous studies reporting that ethanolic extracts of *C. oblonga* show enhanced antimicrobial activity against a wide range of pathogenic bacteria (19,20).

Several studies have reported comparable results. Dilshad *et al*. demonstrated that ethanolic extracts of quince fruit were effective against *Neisseria* spp., *S. aureus*, *P. aeruginosa*, and *E. coli* at higher concentrations (19). Similarly, Suriyaprom *et al*. reported that quince extracts inhibited *E. coli* growth through interference with toxin production (20). Other studies have shown that quince extracts possess inhibitory effects against *Klebsiella pneumoniae*, *Salmonella* spp., and *Pseudomonas* spp. (21,22).

The antibacterial activity of quince extracts is attributed to the presence of bioactive compounds such as phenolic compounds, flavonoids, tannins, and alkaloids. These compounds exert antimicrobial effects through multiple

mechanisms, including disruption of bacterial cell walls, alteration of membrane permeability, inhibition of enzymatic activity, and interference with nucleic acid and protein synthesis (23,29).

The higher efficacy of ethanolic extracts compared to aqueous extracts is consistent with previous reports (24,25). Ethanol facilitates the extraction and penetration of bioactive compounds into bacterial cells, thereby enhancing antibacterial activity. (26,27) In contrast, water-based extraction may be less effective in solubilizing certain hydrophobic compounds. However, extraction conditions must be optimized, as high alcohol concentrations may degrade sensitive bioactive compounds. Therefore, optimizing extraction yield while preserving compound stability is essential (28).

The limited antibacterial activity observed at lower concentrations may be attributed to bacterial resistance mechanisms, including reduced membrane permeability and genetic adaptations (29). Additionally, methodological factors, such as extraction efficiency and compound stability, may influence the observed antimicrobial effects.(30)

Overall, quince extracts have demonstrated promising antibacterial activity against clinically relevant pathogens. These findings support the potential application of quince-derived compounds as natural antimicrobial agents. Compared to conventional antibiotics, plant-derived extracts may offer advantages such as lower cost and fewer reported side effects (6). However, further studies are required to optimize extraction methods, identify active compounds, and validate their clinical and pharmaceutical applications.(31)

CONCLUSION

The present study demonstrated that quince (*Cydonia oblonga* Miller) fruit extracts possess measurable antibacterial activity against clinically relevant pathogens associated with laryngitis, including *S. aureus*, *E. coli*, and *P. aeruginosa*. Antibacterial efficacy was strongly dependent on extract concentration and extraction method, with the 75% ethanolic extract showing the highest inhibitory activity.

The superior performance of the ethanolic extract suggests that solvent polarity plays a critical role in extracting bioactive compounds, particularly phenolics and flavonoids, which are known to contribute to antimicrobial effects. In contrast, aqueous extracts exhibited comparatively lower activity, highlighting the importance of extraction optimization.

Although no statistically significant differences were observed among groups, likely due to the limited sample size and number of replicates, the overall findings support the potential of quince-derived compounds as natural antimicrobial agents. These extracts may have promising applications in both clinical settings and food preservation.

Future studies should focus on the isolation and characterization of active compounds, optimization of extraction protocols, and validation of antimicrobial efficacy using larger sample sizes and advanced analytical methods.

Conflict of Interest :
The authors declare no conflict of interest.

Funding:
This research received no external funding.

Ethics Approval and Consent to Participate:
The study was reviewed and approved by the Medical Ethics Committee of Erbil Polytechnic University (Approval No.: 24/0040 HRE). All participants and/or their legal guardians were fully informed about the study objectives, and written informed consent was obtained prior to participation.

Data Availability Statement:
The data supporting the findings of this study are available from the corresponding author upon reasonable request.

REFERANCES

1. Uddin T.M., Chakraborty A.J., Khusro A., Zidan R.M, Mirta S., Emran T.B., Dhama K., Ripon H.K., Gajdács M., Sahibzada M.U., Hossain J., Koirala N. Antibiotic resistance in microbes: History, mechanisms, therapeutic strategies and future prospects. Journal of Infection and Public Health. 2021;14:1750-66.
doi: https://doi.org/10.1016/j.jiph.2021.10.020.

2. Salam M.A., Al-Amin M.Y., Salam M.T., Pawar J.S., Akhter N., Rabaan A., Alqumber M. Antimicrobial resistance: A growing serious threat for global public health. Healthcare (Basel, Switzerland). 2023;11.
doi: https://doi.org/10.3390/healthcare11131946

3. Dadgostar P. Antimicrobial resistance: Implications and costs. Infect Drug Resist. 2019;12:3903-10.
doi: https://doi.org/10.2147/idr.s234610

4. Ahmed S.K., Hussein S. Qurbane K., Ibrahim R.H., Fareeq A., Mahmood K.A., Mohamed M.G. Antimicrobial resistance: Impacts, challenges, and future prospects. Journal of Medicine, Surgery, and Public Health. 2024;2:100081. doi: https://doi.org/10.1016/j.glmedi.2024.100081.

5. Jubair N., Rajagopal M., Chinnappan S., Abdullah N.B., Fatima A. Review on the antibacterial mechanism of plant-derived compounds against multidrug-resistant bacteria (mdr). Evidence-based complementary and alternative medicine : eCAM. 2021;2021:3663315.

6. Abdallah E.M., Alhatlani B.Y., Menezes R.P., Martins C.H. Back to nature: Medicinal plants as promising sources for antibacterial drugs in the post-antibiotic era. Plants (Basel, Switzerland). 2023;12.
doi: https://doi.org/10.3390/plants12173077.

7. Kostecka-Gugała A. Quinces (cydonia oblonga, chaenomeles sp., and pseudocydonia sinensis) as medicinal fruits of the rosaceae family: Current state of knowledge on properties and use. Antioxidants. 2024;13:71.
doi: https://doi.org/10.3390/antiox13010071.

8. Al-Zughbi I, Krayem M. Quince fruit cydonia oblonga mill nutritional composition, antioxidative properties, health benefits and consumers preferences towards some industrial quince products: A review. Food Chemistry. 2022;393:133362. doi: https://doi.org/10.1016/j.foodchem.2022.133362.

9. Kostecka-Gugała A. Quinces (cydonia oblonga, chaenomeles sp., and pseudocydonia sinensis) as medicinal fruits of the rosaceae family: Current state of knowledge on properties and use. Antioxidants (Basel, Switzerland). 2024;13.

10. Cascales E, García J. Characteristics of the raw fruit, industrial pulp, and commercial jam elaborated with spanish quince (cydonia oblonga miller). Emirates Journal of Food and Agriculture. 2020:623.
doi: https://doi.org/10.9755/ejfa.2020.v32.i8.2140.

11. DK. Bma illustrated medical dictionary: Essential a-z quick reference to over 5,500 medical terms: Dorling Kindersley Limited; 2013.

12. Jetté M. Toward an understanding of the pathophysiology of chronic laryngitis. Perspectives of the ASHA special interest groups. 2016;1:14-25. doi: https://doi.org/10.1044/persp1.sig3.14.

13. Zalvan CH. Laryngopharyngeal and gastroesophageal reflux: A comprehensive guide to diagnosis, treatment, and diet-based approaches: Springer International Publishing; 2020.

14. Zsivanovits G., Szigeti F., Mohácsi-Farkas C. Investigation of antimicrobial inhibition effect of quince fruit extract by rapid impedance method. 2013.

15. Nagappan R. Evaluation of aqueous and ethanol extract of bioactive medicinal plant, cassia didymobotrya (fresenius) irwin & barneby against immature stages of filarial vector, culex quinquefasciatus say (diptera: Culicidae). Asian Pacific journal of tropical biomedicine. 2012;2:707-11. doi: https://doi.org/10.1016/s2221-1691(12)60214-7.

16. Mustafa N.W., Kamel F.H., Elia Z.N. Biological activity of myrrh extract against some pathogenic bacteria: Gc-ms analysis of extract. 2022. doi: https://doi.org/10.17605/OSF.IO/W6FDE

17. Kinnari TJ, Lampikoski H, et al. Bacterial biofilm associated with chronic laryngitis. Archives of Otolaryngology–Head & Neck Surgery. 2012;138:467-70.

18. Thomas C.M., Jetté ME, Clary M.S. Factors associated with infectious laryngitis: A retrospective review of 15 cases. The Annals of otology, rhinology, and laryngology. 2017;126:388-95.
doi: https://doi.org/10.1177/0003489417694911.
19. Tristram D. Laryngitis, tracheitis, epiglottitis, and bronchiolitis: Sore throat, change in voice, feverora wheezing infant in respiratory distress: Introduction to Clinical Infectious Diseases. 2018 Oct 15:75-85. doi: 10.1007/978-3-319-91080-2_7.; 2018. doi: https://doi.org/10.1007/978-3-319-91080-2_7.
20. Najeeb V.D., Abdulaziz S.M., Kurtas P.T. Determination of antibacterial and wound healing potentials of ethanolic extract of cydonia oblonga miller fruit. Diyala Journal of Medicine. 2020;18:44-54.
21. Suriyaprom S., Mosoni P., Leroy S., Kaewkod T., Desvaux M., Tragoolpua Y. Antioxidants of fruit extracts as antimicrobial agents against pathogenic bacteria. Antioxidants (Basel, Switzerland). 2022;11.
22. Silva V., Silva A., Ribeiro J., Aires A., Carvalho R., Amaral J.S., Barros L., Igrejas G., Poeta P. Screening of chemical composition, antimicrobial and antioxidant activities in pomegranate, quince, and persimmon leaf, peel, and seed: Valorization of autumn fruits by-products for a one health perspective. Antibiotics (Basel, Switzerland). 2023;12. doi: https://doi.org/10.3390/antibiotics12071086.
23. Fattouch S., Caboni P., Coroneo V., Tuberoso C.G., Angioni A., Dessi S., Marzouki N., Cabras P. Antimicrobial activity of tunisian quince (cydonia oblonga miller) pulp and peel polyphenolic extracts. Journal of agricultural and food chemistry. 2007;55:963-9. doi: https://doi.org/10.1021/jf062614e.
24. Karar M.G., Daniel P., Rakesh J, Helge W., Nikolai K. Identification, characterization and antimicrobial activity of quince (cydonia oblongata) fruit polyphenols. Food Research International. 2014:121-9.
25. Othman S., Añibarro-Ortega M., Dias M., Ćirić A., Mandim F., Soković M., Ferreira I., Pinela J. Valorization of quince peel into functional food ingredients: A path towards “zero waste” and sustainable food systems. Heliyon. 2022;8:e11042. doi: https://doi.org/10.1016/j.heliyon.2022.e11042.
26. Athanasiadis V., Chatzimitakos T., Bozinou E., Kotsou K., Palaiogiannis D., Lalas S. Optimization of extraction parameters for enhanced recovery of bioactive compounds from quince peels using response surface methodology. Foods. 2023;12. doi: https://doi.org/10.3390/foods12112099.
27. Patra M., Salonen E., Terama M., Vattulainen L., Faller R., Lee W., Holopainen J., Kattunen M. Under the influence of alcohol: The effect of ethanol and methanol on lipid bilayers. Biophysical journal. 2006;90:1121-35. doi: https://doi.org/10.1529/biophysj.105.062364.
28. Huffer S., Clark M.E., Ning J., Clark D. S. Role of alcohols in growth, lipid composition, and membrane fluidity of yeasts, bacteria, and archaea. Applied and environmental microbiology. 2011;77:6400-8.
doi: https://doi.org/10.1128/AEM.00694-11.
29. Gil-Martín E., Forbes-Hernández T., Romero A., Cianciosi D., Giampieri F., battino M. Influence of the extraction method on the recovery of bioactive phenolic compounds from food industry by-products. Food Chemistry. 2022;378:131918. doi: https://doi.org/10.1016/j.foodchem.2021.131918.
30. Zhang F, Cheng W. The mechanism of bacterial resistance and potential bacteriostatic strategies. Antibiotics (Basel, Switzerland). 2022;11. doi: https://doi.org/10.3390/antibiotics11091215.
31. Kamel F., Fathulla C.N., Mahal A., Alkhour A., Rahman S.E., Osman A.S. Antibacterial activity of cassia angustifolia. Vahl (sinameki) leaf extract against some pathogenic bacteria. 2022;4:1108-14.

النشاط المضاد للبكتيريا لمستخلصات نبات السفرجل (*Cydonia oblonga Miller*) ضد بعض مسببات الأمراض المعزولة من التهاب الحنجرة

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الخلاصة

خلفية عن البحث: أصبحت مقاومة مضادات الميكروبات قضية رئيسية في جميع أنحاء العالم؛ ويبذل جهد كبير في الوقت الحاضر لإيجاد عوامل جديدة مضادة للميكروبات. تعتبر مستخلصات السفرجل من بين المواد الطبيعية التي تحتوي على نسبة عالية من مضادات الأكسدة. **الهدف:** التحقيق في النشاط المضاد للبكتيريا للمستخلص المائي والإيثانولي لفاكهة السفرجل ضد بعض البكتيريا المسببة للأمراض المعزولة من التهاب الحنجرة. **المواد وطرق العمل:** تم جمع عينات المسحات من مرضى التهاب الحنجرة، وتمت زراعة العينات على وسائط زراعة مختلفة تستهدف عوامل بكتيرية موجبة الجرام وسلبية الجرام محددة. تم عزل العوامل الميكروبية وتحديدها باستخدام جهاز VITEK. بعد ذلك، تم اختبار المستخلصات المائية والكحولية لفاكهة السفرجل بتراكيز مختلفة (25 و 50 و 75) مجم / مل للتحقيق في النشاط المضاد للبكتيريا ضد العوامل البكتيرية المسببة للأمراض من خلال طريقة agar well-diffusion. **النتائج:** فيما يتعلق بالعوامل المسببة، تم عزل البكتيريا إيجابية الجرام (*Staph. aureus*)، والبكتيريا سلبية الجرام *E. coli* و *P. aeruginosa* من العينات. أظهر مستخلص الفاكهة الكحولي أعلى نشاط مثبط على الأنواع البكتيرية *Staphylococcus aureus* 12) ملم)، تليها *E. coli* و9) *P. aeruginosa* ، 8ملم) على التوالي. كان للمستخلص المائي أقل تأثير على البكتيريا المستخدمة ولكنه أظهر نفس التسلسل من حيث الحساسية. **الاستنتاج:** أظهرت مستخلصات فاكهة السفرجل نشاطًا مضادًا للبكتيريا ضد عوامل ميكروبية محددة. المستخلص الكحولي أكثر فعالية من المستخلص المائي. يمكن لمستخلص النبات هذا أن يثبط البكتيريا المسببة للأمراض المختلفة، وقد يكون لهذا أيضًا أهمية سريرية للاستعمار وكمواد حافظة للطعام.

الكلمات المفتاحية: الأنشطة المضادة للبكتيريا، ثمار السفرجل، التهاب الحنجرة، المستخلص المائي، المستخلص الكحولي.