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- Document Title** : *Phenotypic Characterization of Some Aerobic Spore- Forming Bacterial Isolates*
التوصيف المظهري لبعض العزلات البكتيرية الهوائية المكونة للجراثيم
- Document Language** : Arabic
- Abstract** : Ten isolates of aerobic endospore- forming moderately halophilic bacteria were isolated from a saline habitat at the west coastal region near Jeddah. The isolates showing different colony morphology, rod – shaped, Gram positive and catalase positive were chosen for this taxonomical study. All isolates were mesophilic, neutralophilic, with temperature range of growth between 20 and 40° C and pH range of growth between 7 and 9 pH. Classifying the isolates according to the routine phenotypic tests, resulted first in separating them into two distinct groups, those which grow also under anaerobic conditions (5- 13 – 19), and those which were strictly aerobic (7- 8- 11- 12- 14- 16 - 17). Further classification of these groups according to the other characteristics, and using the newest taxonomical key for identification of this group of bacteria, resulted in identifying one isolate (no. 5) as *Paenibacillus dendritiformis*, two isolates (no. 7-8) as *Bacillus oleronius* , two isolates (no. 13-19) as *P. alvei* , three other isolates (no. 11-12-17) are specified to belong to the *B. subtilis* – *B. atrophaeus* group, and other two isolates (no. 14-16) are possibly new strains, with no match with either of the species named in the key. An additional two aerobic endospore-forming cocci isolated from salt-march soil in Germany were tested for their taxonomical status as well. It was found that these isolates belong to the species *Halobacillus halophilus*. Chemotaxonomic characteristics represented by cell wall analysis and fatty acid profiles of some selected isolates displayed nearly same results. Type strains of *B. megaterium* (DSMZ 90) and *H. halophilus* (DSMZ 2266) were used in this study for confirmation of the results.
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