2.Chemicals Methanol (MeOH) and dichloromethane were purchased from Biochem Chemopharma (Montreal, Quebec, Canada); ethyl acetate, 1–butanol, acetone, DMSO, 2,2–diphenyl–1–picrylhydrazyl (DPPH), Folin Ciocalteu reagent, aluminum chloride (AlCl3), sodium carbonate (Na2CO3), gallic acid, quercetin, and ferric chloride (FeCl3) were purchased from Sigma Aldrich, Chemicals Co (St.The six strains Gram negative are: Escherichia coli ATCC 25922, Pseudomonas aeruginosa ATCC 27853, Enterobacter cloacae, Salmonella enterica, Serratia marcescens and Vibrio cholerae, and the four strains Gram–positive: Staphylococcus aureus ATCC 25923, Bacillus subtilis, Staphylococcus epidermidis and Micrococcus luteus.According to Bekkara et al. [13], 30 g of the plant were macerated in 300 mL of MeOH for 24 h. After filtration and evaporation of the solvent, the first extraction was obtained with 150 mL of hot water and 150 mL of ethyl acetate (2 times).The contents of the mobile phase were filtered before use through a 0.45 um membrane filter, sonicated and pumped from the solvent reservoir to the column at a flow rate of 1 mL/min.After the filtration, the acetone was evaporated and the aqueous layer was extracted respectively with dichloromethane and ethyl acetate (2x180 mL).The plant was tested for the presence of bioactive compounds such as flavonoids, tannins, anthocyanins, alkaloids, saponins, sterols and terpenes following standard procedures [9–11].50 g of the dried plant were macerated in 500 mL of MeOH at room temperature in dark for 24 h. The solvent was evaporated under reduced pressure at 60 ?C by rotary evaporator type Buchi R–200 [12].The two organic phases (ethyl acetate and 1–butanol) were evaporated in a rotary evaporator device to obtain two phases of flavonoids, i.e. ethyl acetate and 1–butanol.In this study, the quantification of some peaks was compared by calibration of standards: ascorbic acid, gallic acid, chlorogenic acid, caffeic acid, vanillin, p–coumaric acid and rutin (Figure 1).The total polyphenols content was expressed in mg equivalent of gallic acid (GA) per gram of extract.Sterile paper discs of 6 mm diameter were impregnated with 10 uL of various concentrations (0.25, 0.5, 1, and 2 mg/mL) of each extract [22]. The aerial part of R. raetam was collected from the Oued Souf region (South–East of Algeria Sahara).According to the method citing in Zhang et al. [14], 30 g of the dried plant were macerated in 300 mL of the water/acetone (7V/3V) in dark and room temperature for 3 days.The content was expressed in mg equivalent of quercetin (Qu) per gram of extract.In this work, we used a High Performance Liquid Chromatography (HPLC) system, type Shimadzu LC 20 AL equipped with an universal injector (Hamilton 25 uL).1 mL of different concentrations of extracts was mixed with 1 mL methanol containing DPPH (10–4 M) and incubated in the dark for 15 min.Experimental 2.1.2.2.2.3.2.3.2.2.3.3.2.3.4.2.3.5.2.3.6.