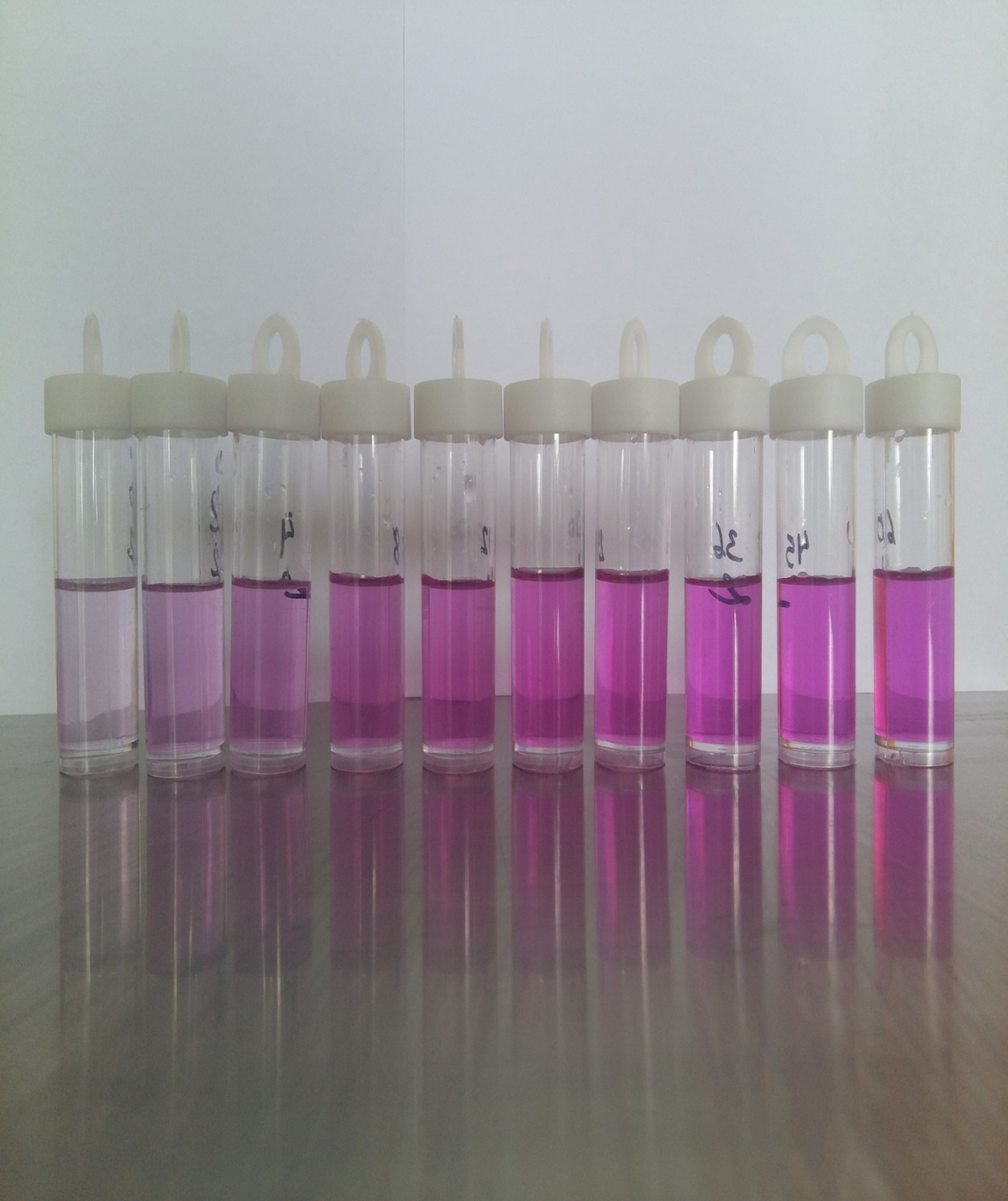
**Supplementary File**



**Figure S.1.** Calcium alginate beads containing ethanolic extract of bougainvillea bracts.



**2 min**

**4min**

**6 min**

**8 min**

**10 min**

**12 min**

**14 min**

**16 min**

**18 min**

**20 min**

**Figure S.2.** Changes in the color of the ethanolic release medium for different times.

**Table S.1**. Chemical characterization and color parameters of *Bougainvillea spectabilis* extracts obtained by two extraction methods.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Extraction**  **Solvent** | **Total Polyphenols**  **(mgEAG/g)** | | **Betalains**  **(mg/gdry basis)** | | **Antioxidant Activity**  **(I%)** | |  | **Color Parameters** |  |
|  |  | BC | | BX | DPPH | ABTS | L\* | a\* | b\* |
| **Aqueous** | 5.79±0.33b | 3.93±0.12b | | 1.32±0.04a | 45.73±2.12b | 65.43±3.94b | 60.10±2.74b | 9.16±0.34b | -13.02±1.04a |
| **Ethanolic** | 6.78±0.24a | 5.04±0.13a | | 1.35±0.06a | 69.24±3.50a | 81.31±4.23a | 75.02±2.14a | 15.12±0.82a | -10.01±0.94b |

BC: betacyanins, BX: betaxhantins. Results are expressed as mean ± standard deviation of triplicate measurements. Values in the same column followed by a different letter differ significantly (P˂0.05).