همزیست­های اجباری و اختیاری در جمعیت­های مختلف سفیدبالک گلخانه *Trialeurodes vaporariorum* (Hem.: Aleyrodidae)

Obligate and facultative symbionts in different populations of the greenhouse whitefly, *Trialeurodes vaporariorum* (Hem.: Aleyrodidae)

**مرضیه کشکولی1و۲  و جهانگیر خواجه­علی۱ **

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| جدول پیوست ۱- مقایسه ویژگی های مرفولوژیک دو گونه سفیدبالک­های *Bemisia tabaci* و *Trialeurodes vaporariorum* در شرایط گلخانه (بزرگنمایی اندک ۲۰×) و آزمایشگاه (بزرگنمایی بالا ۴۰۰-۱۰۰×) (Hill, 1969; European and Mediterranean Plant Protection Organization, 2004; Patel *et al.*, 2022)Supplementary table 1. The comparitions of morphological charecters between two whitefly species, *Bemisia tabaci* and *Trialeurodes vaporariorum,* in greenhouse (low magnification ×20) and laboratory (high magnification ×100-400) conditions (Hill, 1969; European and Mediterranean Plant Protection Organization, 2004; Patel *et al.*, 2022) |
| *Trialeurodes vaporariorum* | *Bemisia tabaci* | Adult characters |
| high magnification (× 100–400) | low magnification (× 20) | high magnification (× 100–400) | low magnification (× 20) |  |
|  | Body pale yellow.  |  | Body dark yellow | Colour |
| Larger than *B. tabaci* | Smaller than *T. vaporariorum* | Size |
| Forewings with anterior margin curved. | Forewings with anterior margin straight | Wing shape |
| Appears broader and more rounded posteriorly with the wings held more flatly. | Appears narrower and more pointed posteriorly with the wings held at a sharper angle (‘tent-like’) | Position at rest |
| Haphazard | Often direct | Flight pattern |
| Compound eyes divided with no lenses between the two group. |  | Eyes divided with single lens forming a “ bridge” between the two groups (or very small gap less than the width of an ommatidium).  |  | Upper and lower compound eyes  |
| Stout spines on mesothoracic legs arranged in two lateral “tufts”. | Spines on mesothoracic legs arranged randomly; not in lateral tufts | Mesotibia |
| No stout sensory setae on segment 3. | Antennae with a stout sensory seta on segment 3. | 3rd antennal segment |
| No pit sensorium on 6th antennal segment. | Antennae with a pit sensorium on segment 6. | 6th antennal segment |

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| جدول پیوست ۲- اجزاء تشکیل دهنده محلول پایه واکنش PCRSupplementary table 2. Ingredients of basic solution for PCR reaction |
| **Quantity** | **Concentrations** | **Materials** |
| 5µl | 150 ng/µl | DNA |
| 2µl | 10X | PCR buffer |
| 0.5µl | 10 mM | dNTPs |
| 0.5µl | 20 pmol/µl | Forward primer |
| 0.5µl | 20 pmol/µl | Reverse primer |
| 1µl | 50mM | Mgcl2 |
| 0.5µl | 5 unites/µl | Taq DNA polymerase |
| 10µl |  | Water |
| 20µl |  | Total |