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Title of thesis: Significance of biochemical parameters in evaluation of silkworm, *Bombyx mori* L. races (Bombycidae – Lepidoptera).

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ABSTRACT

Sericulture in Egypt is a cottage industry practiced in villages. It is a labor intensive industry providing full and part time employment in mulberry cultivation and pre, post cocoon production activities. To make this industry more profitable, efforts put in for improvements of silk production by improving productivity of silkworm races and mulberry varieties.

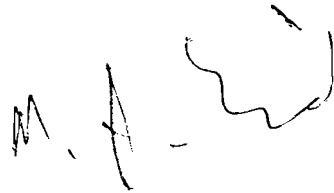
The present study aims to study the by-product components of silkworm, *Bombyx mori* L. races especially those concerning faeces, eggs,. It also, deals with the differences which occur among local races (Novi M, Novi P, 380 M and EJP) in chlorophyll consumption.

Generally it could be concluded that, the present study found the differences among some races of the silkworm, *Bombyx mori* L. in Egypt by evaluating some biochemical contents quantitatively in the faeces excretion (chlorophyll A, B, total chlorophyll and carotene), cocoon shell (fibroin and sericin proteins) and eggs chorion (wax layer).

Also, the rate of food consumed, digestibility and conversion of both chlorophyll and food utilization in the grown larvae (4th and 5th instars) and their relation to the biological and economical characters, were estimated.

Statistical analysis showed significant differences among the races under study in the amount of faeces, chlorophyll A, B, total chlorophyll, carotene extracted from faeces, rate of food consumed, digestibility and conversion of both chlorophyll and food and the fibroin, sericin proteins quantities in cocoon shell.

Also the results showed insignificant in amount of wax in egg chorion between races of *Bombyx mori* L.



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