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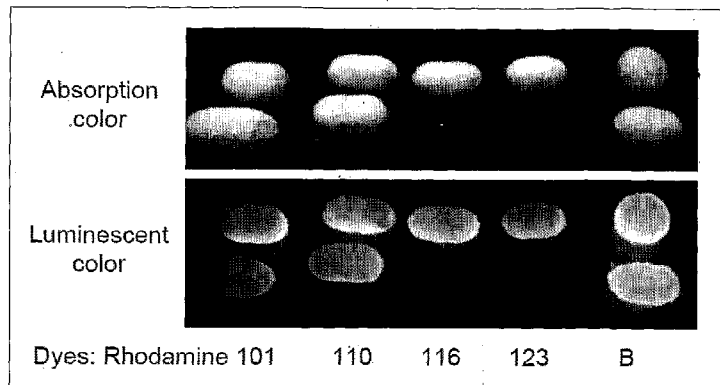
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(54) Title: INTRINSICALLY COLORED, LUMINESCENT SILK FIBROIN AND A METHOD OF PRODUCING THE SAME

FIG. 4



(57) Abstract: This present invention proposes a method of producing intrinsically colored, luminescent silk fibroin by feeding silkworms with feed comprising the luminescent dyes as well as the appropriate degumming process to remove sericin while retaining the dyes in silk fibroin are also described. Luminescent and functional molecular organic dyes with balanced hydrophobic/hydrophobic properties that can be effectively absorbed into silk glands of the silkworm are also described.