Method for obtaining a covalent chitosan-melanin complex from dead black soldier fly Hermetia illucens involves defatting 200–500 g of dead flies with diethyl ether in a Soxhlet apparatus. The material is dried at room temperature, ground, and sieved to a particle size of 0.2–0.5 mm; it is then demineralized with 1,000–2,500 mL of 1% HCl solution at room temperature for 2 hours with stirring. Solid residue is filtered through a porous glass filter, washed with distilled water until the pH reaches neutral, and freeze-dried. Dried mass is processed with a 30–50% NaOH solution at 90–100 °C for 2 hours with stirring. Solid residue is filtered through a porous glass filter, washed with distilled water until the pH reaches 5.5–6.0, and freeze-dried.