

# Artificial medium for chrysomya megacephala

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## ABSTRACT

Abstract Forensic entomology is an entomological research using insect evidences to solve legal cases. The time, cause and location of the death of the corpse are inferred based on the entomological information. The judge of the time of death, the estimates of postmortem interval (PMI), is the major goals in forensic entomology. This is mainly achieved by culturing dipteran larvae that collected from the carcasses to determine the species and age of larvae. This main aim of this study was to develop a standardized recipe artificial medium for *Chrysomya megacephala*, the most common blowfly in Taiwan. Casein is used as the substitute for protein and the yeast extract for carbohydrate. Four artificial media which imitate the nutrients of pig's blood, muscle, liver and brain were used to incubate larvae of *C. megacephala*. The organic pig liver was used as control. Wild adults were also compared with cultured flies. Four characters were measured, the length of discal median-cubital cross vein (dm-cu), accumulated degree-hours (ADH), rate of pupation and survival rate. The result shows all the four characters of *C. megacephala* fed on artificial liver medium are not significant different to those fed on organic liver. The length of dm-cu was also no significant difference with the wild individuals. The results indicate this newly developed casein-yeast based artificial medium is feasible for the incubation of *C. megacephala*. For the reference for forensic application in the future, growth curves of *C. megacephala* based on this new medium were determined at three different temperatures.

Keywords : forensic entomology、*Chrysomya megacephala*、artificial medium、dm-cu、ADH

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