

85. 洗選蛋機廢水特性之調查

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本研究旨在調查國內不同洗選蛋機器產生之廢水特性，最後根據供廢水分析資料，供業界研發適合之廢水處理方式，解決廢水問題。採集之洗選蛋機器廢水，來自 5 場不同蛋雞場之附設洗選蛋雞場，每場於不同日期採樣 3 次以上。機器用水的方式分成水沖洗完同時排出 (Disposable way, DW) (3 場) 與水沖洗完經回收過濾再使用式 (Recycling filtration reused way, RFRW) (2 場)。於機器運轉期間，採集雞蛋清洗階段產生之廢水，每次以 2 L 之 PP 桶採集 2 桶。分析廢水中之 pH、COD (化學需氧量)、TS (總固形物)、VS (揮發性固形物)、NH₄⁺-N (氨氮) 與 TN (總氮)。結果顯示，除 pH 外，RFRW 之廢水分析值濃度均顯著高於 DW。

關鍵語：洗選蛋機、蛋雞場、廢水

Investigation egg washing and grading machine wastewater characteristics

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The aim of this study is to investigate the characteristics of wastewater yielded by different egg washing and grading machines in our country, and based on the wastewater analysis data, to provide the industry with suitable wastewater treatment methods to address wastewater issues. The collected wastewater from egg washing machines is sourced from egg-laying chicken farms at five different locations, with samples taken on three or more occasions at each location. There were two ways for the machine to use water, The water usage in the machines is divided into two methods: water flushing and simultaneous discharge (Disposable way, DW) (three sites) and water flushing followed by recycling and filtration for reuse (Recycling filtration reused way, RFRW) (two sites). Wastewater generated during the egg washing phase of machine operation was collected in 2-liter PP containers, with two containers collected each time. Analyze the wastewater pH, COD (Chemical oxygen demand), TS (Total solids), VS (Volatile solids), NH₄⁺-N (Ammonium nitrogen), and TN (Total nitrogen). The results show that, except for pH, the wastewater analysis values in RFRW is significantly higher than in DW.

Key Words: Egg washing and grading machine, Laying hen farms, Wastewater