

赴法國 SEPPIC 公司研習疫苗佐劑製作與評估方式

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摘要

佐劑是獸醫疫苗研發與製造領域中非常重要的一環，佐劑的良窳對於疫苗效果好壞有著重大的影響。但由於目前我國國內尚無佐劑製造之專業廠商，目前使用於動物界之疫苗佐劑皆來自於國外，除成本提高降低競爭力外，佐劑與抗原混合的製成常常也是影響疫苗效能的重要關鍵。因此，為了能有效提昇我國動物疫苗品質，在法國 SEPPIC 公司的同意之下，於今(98)年 8 月 28 日至 9 月 8 日赴法國前往該公司位於卡斯特爾(Castres)生產佐劑之工廠與歐洲研發中心實驗室進行參訪與佐劑混合之實驗室操作與確效。過程中我們學習乳化之基本觀念、所需設備以及不同佐劑之特性等，對於佐劑與抗原混合後之確效評估與穩定性等基本要求，也在這次的訓練中詳細說明並給與我們實地操作。這趟參訪讓我們深深體驗到，一個好的疫苗或佐劑使用步驟是需要許多關鍵技巧的掌握以及確效評估的。未來也希望在商業佐劑或自行研發之佐劑應用於我國獸醫疫苗效能之提昇上能有所貢獻。

Manufacturing and quality evaluation for vaccine adjuvants

in Seppic S. A., France

Ming Chung Deng

Abstract

Adjuvants have been the detrimental part in the development and manufacture of animal vaccines. The efficacy and safety of vaccines are greatly dependent on the activity and quality of an adjuvant. Since no manufacturer specifically for the adjuvant production has ever been established in Taiwan so far, adjuvants used in animal vaccines are mostly imported. This leads to an increase in the manufacturing cost with reduction of competitiveness for Taiwanese animal vaccines. In addition, the mixing process of antigen solution with oil adjuvant is also a crucial step for the efficacy of vaccines. For the improvement of the vaccine quality, therefore we are authorized to visit the adjuvant manufactory and Europe research center of SEPPIC in Castres on 28 Aug to 8 Sep 2009 for performing the mixing skills and operating the equipments in the laboratory under instructions of SEPPIC's specialists. We studied the fundamental concept of emulsification, the needed equipment, specific characteristics of various adjuvants, and evaluation criteria for the efficacy and stability of mixtures after emulsification of antigen and adjuvants. The SEPPIC specialists explained these in details and also offered a basic training that made us actually performed these mixing skills in the laboratory. This visiting made us realize that a successful vaccine needs several key steps of emulsification and has to reach the evaluation criteria for the vaccine efficacy and stability. We sincerely hope that the knowledge and experience of the visiting can make efforts to the development and research of adjuvants for the quality enhancement of the veterinary vaccines in Taiwan.