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**CALF BONES AS GELATIN RAW
MATERIALS IN THE MANUFACTURE OF
PHARMACEUTICAL CAPSULES**

RESEARCH STUDY

Applied Research IV

JULIUS PENALBA MOSICA

CAVITE STATE UNIVERSITY

Indang, Cavite

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**CALF BONES AS GELATIN RAW
MATERIALS IN THE MANUFACTURE OF
PHARMACEUTICAL CAPSULES**

**A Research Study Submitted to the Faculty
of the Laboratory School, College of Education
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**In Partial Fulfillment of the Requirements
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*Calf bones as gelatin raw materials in the
manufacture of pharmaceutical capsules*
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**JULIUS PEÑALBA MOJICA
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ABSTRACT

MOJICA, JULIUS P., Applied Research IV (General Science Curriculum), Cavite State University, Indang, Cavite, April 1999. **“CALF BONES AS GELATIN RAW MATERIALS IN THE MANUFACTURE OF PHARMACEUTICAL CAPSULES”**. Advisers: Prof. Dulce L. Ramos and Mrs. Myleen P. Legaspi

The study entitled “Calf Bones as Gelatin Raw Materials in the Manufacture of Pharmaceutical Capsules” was conducted at the researcher’s residence at 630 J. Dimabiling St. Indang, Cavite and at the Food Processing Center of the Cavite State University from May to November 1998. This study was conducted for the following reasons: 1) utilize the local collagenous material (calf bones) in the production of gelatin; 2) use the extracted gelatin for the manufacture of pharmaceutical capsules and 3) determine the best calf bone gelatin- water concentration in the manufacture of capsule.

There were four treatments developed. The first treatment (T₁) used 10g of calf bone gelatin in every 25 ml of water. The second treatment (T₂) consisted of 10g of calf bone gelatin in every 20 ml of water. The third treatment used 10g of calf bone gelatin in every 15 ml of water. The last treatment (T₄) used 10g of calf bone gelatin in every 10 ml of water.

Results showed that the produced capsules regardless of treatment have the same color and odor that is white to dirty white with no disagreeable odor. It also revealed that among the four samples evaluated there were highly significant differences in the two sensory qualities, which are consistency and general acceptability.

In general, Treatment three (T₃), which used 10g of calf bone gelatin in every 15 ml of water, gave the best calf bone gelatin- water concentration among the four samples.

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CALF BONES AS GELATIN RAW MATERIALS IN THE MANUFACTURE OF PHARMACEUTICAL CAPSULES

by

Julius P. Mojica

A research study presented to the Faculty of the Laboratory School, College of Education of the Cavite State University, Indang, Cavite, in partial fulfillment of the requirements in Applied Research IV, under the advisorship of Prof. Dulce L. Ramos and Mrs. Myleen P. Legaspi.

INTRODUCTION

Gelatin is a mixture of protein substances of animal origin. It is a refined extract of collagenous tissue, which form clear, viscous solutions in water or simply a protein of high purity. It is probably one of the most versatile raw materials available today. The broad versatility can best be emphasized by pointing out its primary function as a gel former or as protective colloid; but that can also serve as a clarifier, binder, film former, flocculator, thickener, moistener, texturizer, and emulsifier.

Developing countries like the Philippines has livestock resources, the by-products of which in many cases are under utilized. One of these is calf bone that can be processed and made into gelatin. Previous studies indicated a real interest in the market of gelatin and in gelatin manufacturing processes. The interest was derived partly from the increasing awareness of the advantages to be gained from the processing of raw material and partly from the realization that the local market of gelatin-based products such as pharmaceutical capsules was expanding rapidly to make production a viable