

**PENURUNAN KADAR FORMALIN PADA BAKSO SAPI DENGAN  
LARUTAN BELIMBING MANIS (*Averrhoa carambola*)  
BERDASARKAN VARIASI KONSENTRASI  
DAN WAKTU PEREBUSAN**

Fifin Pradani<sup>1</sup> , Ana Hidayati Mukaromah<sup>2</sup> , Fandhi Adi Wardoyo<sup>2</sup>

1. Program studi DIV Analis Kesehatan Fakultas Ilmu Keperawatan dan Kesehatan Universitas Muhammadiyah Semarang.
2. Laboratorium Kimia Fakultas Ilmu Keperawatan dan Kesehatan Universitas Muhammadiyah Semarang

**ABSTRAK**

Bakso adalah makanan yang terbuat dari daging sapi, ayam, dan ikan, serta memiliki cita rasa khas dan disukai masyarakat, memiliki nilai ekonomi dan nilai gizi yang cukup tinggi. Bakso mudah mengalami pembusukan dan sering ditambahkan formalin untuk mempertahankan kualitasnya. Formalin adalah bahan tambahan yang dilarang digunakan dalam pangan karena dapat menyebabkan beberapa penyakit bahkan kematian. Penelitian ini bertujuan untuk menurunkan kadar formalin pada bakso dengan menggunakan larutan belimbing manis dengan variasi konsentrasi dan waktu perebusan. Objek penelitian adalah bakso yang direndam formalin 1% selama 30 menit, kemudian dilakukan penurunan kadar formalin pada bakso dengan variasi konsentrasi larutan belimbing manis (10 %, 15 %, dan 20 %v/v) dan variasi waktu perebusan (10, 20, dan 30 menit). Penetapan kadar formalin ditetapkan dengan metode spektrofotometri. Hasil penelitian adalah panjang gelombang optimum untuk penetapan awal dan akhir formalin pada 570nm dan waktu kestabilan optimum pada 20 menit. Persentase penurunan kadar formalin tertinggi adalah 70,62% diperoleh di larutan belimbing manis 20%v/v selama perebusan 30 menit.

**Kata Kunci :** Bakso, Formalin, Larutan Belimbing Manis.

## **DECREASING OF FORMALIN LEVELS IN BAKSO COW WITH SWEET SPINAL SOLUTIONS (*Averrhoa carambola*) BASED ON FUSION CONCENTRATION AND BREEDING TIME**

Fifin Pradani<sup>1</sup>, Ana Hidayati Mukaromah<sup>2</sup>, Fandhi Adi Wardoyo<sup>2</sup>

1. DIV Study Program Health Analyst Faculty of Nursing and Health Sciences University of Muhammadiyah Semarang.
2. Chemical Laboratory, Faculty of Nursing and Health, University of Muhammadiyah Semarang

### **ABSTRACT**

Meatballs are foods made from beef, chicken, and fish, and have a distinctive taste and are preferred by the community, have high economic value and nutritional value. Meatballs prone decomposition and often added formalin to its quality. Formalin is an additional ingredient that is prohibited from being used in food because it can cause several diseases and even death. This study aims to reduce levels of formalin in meatballs by using a sweet starfruit solution with a variety of concentration and boiling time. The object of the study was meatballs soaked in 1% formalin for 30 minutes, then reduced the levels of formalin in meatballs with various concentrations of sweet starfruit solution (10%, 15%, and 20% v / v) and variations in boiling time (10, 20, and 30 minutes). Determination of formalin content was determined by spectrophotometric method. The results of the study were optimum wavelength for the determination of the initial and final formalin at 570nm and the optimum stability time at 20 minutes. The highest percentage of formalin reduction was 70.62% obtained in a sweet starfruit 20% v / v solution for 30 minutes boiling.

**Keywords :** Meatballs, Formalin, Sweet Starfruit Solution.