

Microbiological Analysis and pH of Rollmops and Similar Products

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The *rollmops* is a preparation of fish rolled with vegetables, preserved in an acidic medium usually based on vinegar. Rooted in German and Scandinavian cuisine, its name derives from the German *"rulle"* (rolled) and *"mops"* (small dog), originating in Germany in the late 19th or early 20th century. While not common in Brazilian cuisine, it is more consumed in the southern region influenced by German immigrants. The marination and brining technique, ancient and widely spread, allowed prolonged storage before refrigeration became popular. In addition to traditional *rollmops*, variations include roller fish made with sardines, onion, vegetable oil, salt, seasoning, and semi-preserved sardine fillet in escabeche with cucumber. To our knowledge, there are no studies in the literature addressing the hygienic sanitary conditions of these products. This study aimed to assess the hygienic sanitary condition of three different food products: *rollmops*, roller fish, and semi-preserved sardine fillet in escabeche with cucumber. Samples were obtained directly from the manufacturer and local markets in the metropolitan region of Curitiba, PR, Brazil. All samples were within the manufacturer's expiration date, with no changes in packaging or labeling. The pH of the samples was measured according to the pH meter manufacturer's recommended methodology. Microorganism research was performed using laboratory methods of incubation in culture media and Most Probable Number analysis for Total Coliforms and Thermotolerant Coliforms. For the identification of *Salmonella* spp., steps described in the literature were followed, including pre-enrichment, selective enrichment, and isolation for identification. The pH values obtained were 4.04 for *rollmops*, 4.02 for *roller fish*, and 4.76 for semi-preserved sardine fillet in escabeche with cucumber. Analyses revealed ≤ 3 MPN/g of Total Coliforms and Thermotolerant Coliforms, as well as absence of *Salmonella* spp. in the evaluated samples. The pH values recorded in the products indicate a slightly acidic environment. The absence of total coliforms and *Salmonella* spp. bacteria in the samples indicates that the preservation methods employed were effective in maintaining microbiological safety. These findings suggest the adequacy of the methods used to ensure the quality and safety of the investigated foods.

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