

## Quantitative descriptive analysis as a method to describe perceived sensory characteristics of food items on a modified texture menu

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Modified texture foods and thick consistency fluids are used as treatment for individuals with breakdown in competence of chewing and swallowing (dysphagia). Commonly used descriptions of the required food processing include soft, minced, vitamised, pureed, mashed or cut up. In a recent survey (1) in South Australia, the number of different textures available in hospitals were three or more in 24%, two in 24%, one in 39%. In nursing homes and hostels, 21% offered three or more; 29% offered two, and 31% offered one. Confusion over the 'correct texture' required, commonly leads to overprocessing which may cause nutritional compromise for the client as well as a lack of appealingly-presented meals (2). A food tasting panel approach can improve the situation given an appropriate measuring tool. This paper presents the assessment by the panel of a range of foods processed at Julia Farr Services. A numerical scoring system, giving a range of values along a continuum, describes the characteristics of each menu item. A maximum score for both texture and consistency guides the decision as to suitability of the product for the prescribed diet.

A Quantitative Descriptive Analysis (QDA) method was adapted from 'Sensory Evaluation Practices' (2). A panel of interested nurses, speech pathologists, dietitians, cooks, hotel services staff, clients and family members were trained in the process of sensory analysis. A questionnaire was developed. Organisation support was obtained given the likely outcome of quality improvement for the food service. Standardised commercial foods were provided for three trial sessions to facilitate reliability. Reference foods were subsequently chosen for the continuum of each of the sensory characteristics. Reliability of members in the use of the questionnaire was evaluated by presenting several foods four times each. With six members to test each food, and six to seven foods per week the process took 20 weeks.

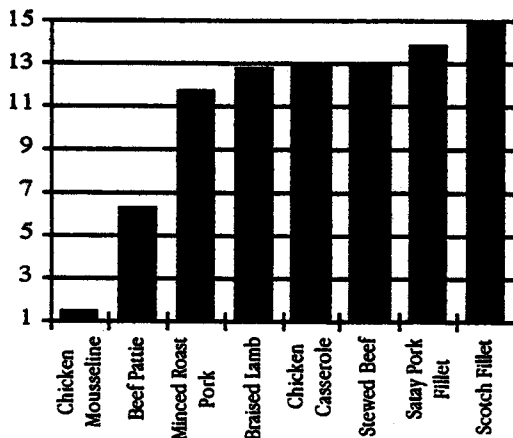


Figure. Texture (hardness, crunchiness, chewiness, rate of breakdown). Of all characteristics measured, texture of meats in soft diets is probably the most contentious issue. Based on 50 food items generally included in soft diets, a cut-off for acceptability was deemed to be 13. As can be seen, using this quantitative approach several forms of meat are demonstrably unsuitable, a fact often reported by those who feed dysphagic patients. Satay pork using pork fillet and Beef Wellington using scotch fillet despite being expensive cuts of meat did not meet the criteria for the soft diet. Other braised and stewed meats were borderline.

A quantitative method for testing texture and consistency of foods in services with dysphagic patients provides improved accuracy in the determination of menu items, and the cooking and processing recommendations. Follow-up testing provides quality assurance in this area.

1. Cross G, Mills E, Penniment K. Modified consistency diets and fluids; terminologies and descriptions. Royal Adelaide Hospital, SA, 1995.
2. Martin J, Backhouse J. Good looking, easy swallowing. XV International Congress of Nutrition, Adelaide, 1993;2:563.
3. Stone H, Sidel JL. Sensory evaluation practices. 2nd ed. San Diego: Academic Press, 1993.