1. Record Nr. UNINA9910139020903321

Titolo	The science of meat quality [[electronic resource] /] / edited by Chris R. Kerth
Pubbl/distr/stampa	Ames, Iowa, : Wiley-Blackwell, 2013
ISBN	1-118-53072-1 1-118-53073-X 1-299-46454-8 1-118-53069-1
Descrizione fisica	1 online resource (315 p.)
Classificazione	SCI070000
Altri autori (Persone)	KerthChris R
Disciplina	641.3/6
Soggetti	Meat - Quality Meat industry and trade - Quality control
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	The Science of Meat Quality; Contents; Contributors; Chapter 1 Growth of Muscle from the Myoblast to Whole Muscle; Introduction; Overview of Skeletal Muscle Development; Types of Muscle; Structure of Muscle; Organization of Whole Muscle; Fiber-Type Development; Hyperplasia (Prenatal Muscle Development); Overview; Embryogenesis of Muscle; Myogenesis; Biphasic Fiber Formation; Hypertrophy (Postnatal Muscle Development); Satellite Cells; Protein Turnover; Protein Synthesis; Protein Degradation; Muscle Cell Culture; Basic Concepts of Cell Culture Culture of Established Muscle Cell Lines-Murine C2C12 MyoblastsPropagation; Subculturing; Cell Quantification; Induction of Differentiation and Fusion; Cryopreservation; Thawing Cryopreserved Stocks; References; Chapter 2 Animal Growth and Empty Body Composition; Composition of the Empty Body from Birth to Harvest; Chemical Composition; Physical Separation; Magnetic Resonance Imaging; X-Ray Computed Tomography Scanning; Near-Infrared Reflectance; Total Body Electromagnetic Conductivity (TOBEC); Dual-Energy X-Ray Absorptiometry; Video Image Analysis; 40K Liquid Scintillation Counter Dilution TechniquesUltrasound Technology; Specific Gravity; Carcass

Yields of Closely Trimmed Retail Product or Fat-Free Lean; Summary; References; Chapter 3 Muscle Structure and Cytoskeletal Proteins; Introduction; Connective Tissue; Organizational Structure of Muscle; Muscle Cell Structure; Proteins of the Muscle; Contractile Proteins; Z-disk Protein; Gap Filaments; Intermediate Filaments; Costameric Proteins; Isolating Myofibrillar Proteins; Purifying Myofibrils; Procedure; Result; References; Chapter 4 Muscle Metabolism and Contraction; Introduction; Metabolism; Glycolysis
Oxidative PhosphorylationMuscle Contraction; Nerve Impulse; Relaxation; Muscle Fiber Types; Fiber Typing Procedure-Combined Stain for Identifying Muscle Fiber Types; Principle; Solutions; Staining Sequence for Bovine; Staining Sequence for Ovine; Staining Sequence for Porcine; Chemicals Needed for Staining Procedures; References; Chapter 5 Converting Muscle to Meat: The Physiology of Rigor; Introduction; Muscle Metabolism upon Exsanguination; Development of Meat Quality; Water-Holding Capacity; Meat Color; Aging and Tenderness; Antemortem Factors; Genetics; Stress and Diet; Postmortem Factors
Protein ProteolysisCalpains; Cathepsins; Muscle Ultrastructure; Temperature and Chilling; Electrical Stimulation; Analysis of Muscle pH; Taking the Measurement; Analysis of Sarcomere Length; Solutions; 0.1 M NaHPO4 Buffer at pH 7.2; 0.2 M Sucrose in 0.1 M NaHPO4 Buffer at pH 7.2; Preparation of Muscle for Laser Diffraction; Sarcomere Length Determination; References; Chapter 6 Meat Tenderness; Introduction; What is Tenderness?; Factors that Affect Tenderness; Sarcomere Contractile State; Myofibrillar Protein Degradation; Connective Tissue; Background Effect; Measuring Tenderness; Shear Force
Sarcomere Length

Sommario/riassunto

Meat has been a long sought after source of nutrients in human diets. Its nutrient-dense composition of protein, fats, vitamins and minerals makes it an integral part to healthy and balanced diets. As demand for meat continues to increase globally, a better understanding of efficiently producing quality meat products is becoming increasingly important. The Science of Meat Quality provides comprehensive coverage of meat quality from the biological basis of muscle developmen