

1. Record Nr.	UNINA9910954559303321
Autore	Von Fraunhofer J. A (Joseph Anthony)
Titolo	Dental materials at a glance // J. Anthony von Fraunhofer
Pubbl/distr/stampa	Ames, Iowa, : Wiley, 2013
ISBN	9781118646489 1118646487
Edizione	[2nd ed.]
Descrizione fisica	1 online resource (336 p.)
Collana	At a glance series
Disciplina	617.695
Soggetti	Dental materials Dental instruments and apparatus
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	Cover; Title page; Copyright page; Dedication; Preface; Part I: Fundamentals; 1: Properties of materials-tensile properties; 2: Toughness, elastic/plastic behavior, and hardness; 2.1 Elastic and plastic behavior; 2.2 Viscoelasticity; 2.3 Stress relaxation; 2.4 Fracture toughness; 2.5 Determining mechanical properties; 2.6 Abrasion and wear resistance; 3: Physical properties of materials; 3.1 Thermal and electrical properties; 3.2 Optical properties (color and appearance); 4: Adhesion and cohesion; 4.1 Forces in cohesion; 4.2 Forces in adhesion; 4.3 Mechanisms of adhesion 4.4 The adhesion zone5: Mechanical adhesion; 5.1 Contact angle and surface tension; 5.2 Micromechanical adhesion; 6: Dental hard tissues; 6.1 Dental enamel; 6.2 Dentin; 6.3 Cementum; 6.4 Fluoridation of enamel; 6.5 Strontium; 7: Bone; 7.1 Dental implants and bone; Part II: Laboratory materials; 8: Gypsum materials; 8.1 Dental gypsum materials; 8.2 Setting reaction; 8.3 Water-to-powder (W/P) ratio; 8.4 Factors in setting; 8.5 Physical properties; 8.6 Comparative properties; 9: Die materials; 9.1 Gypsum products; 9.2 Handling of gypsum materials; 9.3 Polymeric die materials 9.4 Pouring the impression10: Dental waxes; 10.1 Composition; 10.2 Wax properties; 10.3 Dental waxes; 11: Investments and casting; 11.1 Casting and investments; 11.2 Gypsum-bonded investment; 11.3 High-temperature investments; 11.4 Considerations in casting; Part III: Dental biomaterials; 12: Inelastic impression materials; 12.1 Factors in

impression-making; 12.2 Inelastic impression materials; 13: Elastic impression materials; 13.1 Alginate (irreversible) hydrocolloids; 13.2 Agar-agar (reversible) hydrocolloid; 13.3 Polysulfide rubber; 13.4 Condensation-cured silicones  
13.5 Addition-cured silicones (polysiloxanes) 13.6 Polyether impression materials; 13.7 Properties of elastic impression materials; 13.8 Tray adhesives; 14: Occlusal (bite) registration materials; 14.1 Traditional registration materials; 14.2 Modern registration materials; 15: Precious metal alloys; 15.1 Gold and noble metals; 15.2 Precious metals; 15.3 Gold alloys; 15.4 Heat treatment of gold; 15.5 Problems with castings; 16: Base metal alloys; 16.1 Cast chromium alloys; 16.2 Investments and casting; 16.3 Microstructure; 16.4 Heat treatment; 16.5 Physical and mechanical properties  
16.6 Titanium and titanium alloys 17: Porcelain bonding alloys; 17.1 PFM restorations; 17.2 Ceramic-noble metal systems; 17.3 Ceramic-base metal systems; 18: Implant metals; 18.1 Implant alloys; 19: Partial denture base materials; 19.1 Metallic RPDs; 19.2 Polymeric RPDs; 20: Complete denture bases-acrylic resin; 20.1 Polymerization reactions; 20.2 Polymer properties; 20.3 Problems with denture bases; 20.4 Denture teeth; 20.5 Soft dentures; 21: Modified acrylics and other denture base resins; 21.1 High-impact resins; 21.2 Pour-type resins; 21.3 Rapid-cure resins; 21.4 Light-cure resins  
22: Denture fracture and repair

---

#### Sommario/riassunto

---

Dental Materials at a Glance, 2nd edition, is the latest title in the highly popular At a Glance series, providing a concise and accessible introduction and revision aid. Following the familiar, easy-to-use at a Glance format, each topic is presented as a double-page spread with key facts accompanied by clear diagrams encapsulating essential information. Systematically organized and succinctly delivered, Dental Materials at a Glance covers: Each major class of dental material and biomaterialBasic chemical and physical properties

---