

# Dental Materials, Instruments, and Devices

With the tremendous growth in the introduction of new dental materials, often with novel uses, the profession and the dental manufacturer have assumed an important responsibility—the need for meaningful data on behalf of the newer products under actual oral and maxillofacial conditions. Data are needed on strength, dimensional stability, endurance, fatigue, temperature effects, and toxicity, as well as specialized performance characteristics that are important only for certain types of products, such as implants.

In recent years the profession has witnessed the introduction and subsequent withdrawal from the market of numerous unsatisfactory products and techniques. The profession was forced to field test many of these unsatisfactory products and techniques for dental manufacturers and responded by discarding them.

These unsatisfactory products should never have reached the market in the first place. As long as there is little or no control over what dental manufacturers can place on the market for restorative and preventive purposes, it is up to the individual dentist to exercise utmost caution over the products he or she uses.

The specification and certification programs of the American Dental Association (ADA), designed to enable the dentist to select the most suitable products for his or her dental health services, with the thought that concern for the patient's well being is paramount, were terminated in 2007. Previous to that the ADA discontinued publication of *Dentists' Desk Reference: Materials, Instruments and Equipment*, after editions in 1981 and 1983, to which the author contributed the chapter on denture base resins.

The *ADA Professional Product Review* was introduced in 2006 under the sponsorship of the ADA Council on Scientific Affairs to provide ADA members with content compiled from reliable scientific sources. The objective is to supply user-friendly, unbiased, clinically relevant, and scientifically sound information.

From 2006 to 2011 the ADA Laboratories in Chicago

conducted numerous product evaluations for the *Professional Product Review*. The *Review* has published panel discussions, product survey data, product category “primers,” and practitioner input. More recently, the *Review* published topics on dental therapeutics and clinical techniques.

The *Review* began as a 16-page, quarterly publication delivered with the *Journal of the American Dental Association (JADA)*. Beginning in April 2012 the *Review* moved online. Summaries are now printed in the corresponding issue of the *JADA*. ADA members can access all issues of the *Review* archives online. Plans call for the *Review* to be published on a monthly basis in the future.

A recent article by Simon Hearne<sup>1</sup> discusses the grey market, which are dental products sold through an unsecured supply chain. These products fall into three groups: products diverted from an authorized channel, repackaged or relabeled products, and counterfeit goods.

Hearne strongly recommends purchasing products only from a manufacturer's authorized distribution channels. In case of questions about the distributor or source, the manufacturer should be contacted and questioned.

When selecting dental materials, it should be remembered that fundamentals do not change. They cannot be violated. It is only methods, procedures, and formulation or composition, by which the dentist can attain the best possible outcome that change. The responsibility of decision always rests with the dentist, who must assess all aspects in relation to the results that he or she hopes to realize. If dentists do not care enough, who else can be expected to act in their behalf?

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## REFERENCE

1. Hearne S. The black-and-white truth about the grey market. *Dent Econ*. 2015;105:16–17.