

Other Material Questions

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Alternatives to Canfield's D.S. Dressing for Dry Socket Treatment (1/07)

Question: With the Air Force policy banning the use of C. R. Canfield's D.S. Dressing for dry socket treatments, what should be used as an alternative?

Answer: The Air Force Dental Service published Policy Letter P06-06 in October 2006 following an FDA injunction against C.R. Canfield Co. that barred the use of D.S. Dressings in Air Force health-care facilities. Canfield dressing contained 20% eugenol as an active ingredient and was packaged for individual use. The company has stated that it intends to retool its manufacturing process, comply with government regulations, and be back on the market in the near future.

Unfortunately, until this product is available again DECS has not found a similar product that is packaged for individual use. The Air Force Consultant for Oral and Maxillofacial Surgery has issued a [Point Paper](#) on alternative dressing materials for the treatment of localized alveolar osteitis (i.e., dry socket).

Resorbable and non-resorbable materials are both listed as suggestions for dry socket treatment. Alvogyl, a resorbable, radiopaque material contains eugenol and butamben as active ingredients. The product is placed directly into the extraction site. It can be purchased from Septodont [(800) 872-8305, www.septodont.com] or from dental distributors (e.g., Henry Schein). The retail price is \$58.99 per jar from Septodont and each jar can treat approximately 60 sites. Sultan Dental Products [(800) 238-6739, www.sultanhealthcare.com] markets Sultan Dry Socket Paste that can be applied to a nonresorbable gauze strip. Active ingredients include eugenol and 1.6% chlorobutanol. The Sultan paste is sold in a one ounce jar from distributors for approximately \$70.00 or in a case of 12 jars for \$540.00 from Sultan.

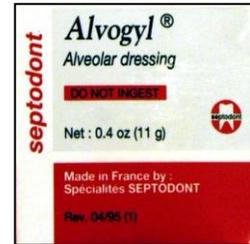
Another nonresorbable product is Dressol-X from Rainbow™ Specialty and Health Products, Inc [(800) 268-3384, www.rainbowspecialty.com]. This medicament is premixed and has a radiopaque marker; however, it contains aspirin and cannot be used on patients with ASA allergy or G6PD deficiency.

When a gauze strip is used to place a medicament into an extraction site, DECS recommends that the strip have a radiopaque marker. Ace Surgical Supply [(800) 441-3100, www.acesurgical.com] makes a ¼" gauze strip with a radiopaque filament sewn into it. This gauze strip can also be used with locally mixed Tappe paste or eugenol liquid with or without an emollient (petroleum jelly) as an alternative to a commercially-produced product. When a nonresorbable gauze strip is used in treatment of dry socket, only one strip should be placed into any single extraction site. Removal of the nonresorbable dressing must be confirmed by the provider.

Reference

Smith D. Alternative Dressing Materials for the Treatment of Localized Alveolar Osteitis. [Point Paper](#). December 2006.

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Everchanging Names of Products (Originally published in Jan 2001)

Question: I am really becoming confused about the names of certain products? It's irritating because it seems like once I figure out which product it is I like, the company changes the name. Why?

Answer: You are certainly correct about the frequency with which the brand names of dental materials can change. Here are a few examples: Vitrabond (3M ESPE) was changed to Vitrebond, Fuji Duet Cement (GC America) was changed to Fuji Plus, and Vitremer Luting Cement (3M ESPE) was changed to RelyX. Some changes are made for legal reasons, while others occur in order to associate a product with a larger product line. While some names change completely, others are only modified, which can also cause confusion. For example, Dyract was changed to Dyract AP, Compoglass to Compoglass F, Photac-Fil to Photac-Fil Quick, and Fuji II LC to Fuji II LC Improved. Most often these changes are made to indicate a purported improvement that the manufacturer has made to the original version of the product. The bottom line is that too many products have names that are too similar and the frequency with which product names are modified or completely changed adds to the confusion. There isn't a lot that we as individuals can do to prevent name changes other than let the manufacturers know that the practice can cause confusion.

The hybrid resin/glass-ionomer products represent some of the most rapidly materials in dentistry, so they seem to be prone to name changes. The following table contains a current list of some popular products from the major manufacturers. Manufacturers and products are hyperlinked to their respective web pages.

Types/Brands of Resin-Modified Glass Ionomers

Manufacturer	Luting Cements	Restorative	Liner/Base
GC America	Fuji Plus	Fuji II LC Improved	Fuji Lining LC
3M ESPE	RelyX	Vitremer Photac-Fil Quick	Vitrebond Photac Bond

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Captek Alloy System (Originally published in the Jan 2000 issue)

Question: I hear there is a material that you can use to form metal-ceramic substructures without investing or casting. Do you have any information on this material?

Answer: Captek is an alloy system that eliminates the need for investing, burning out, and casting normally used to fabricate crown and bridge substructures with traditional metal-ceramic alloys. Captek uses a refractory die and a noble metal-impregnated wax to produce substructures for metal-ceramic restorations. The Captek substructure is made by pressing a gold-platinum-palladium impregnated wax (CAPTEK P) to the refractory die and trimming it at the margins. It is then fired in the porcelain furnace at 1967°F (1075°C) which causes molecular particles to join, creating a three-dimensional network of capillaries. A layer of gold-impregnated wax (CAPTEK G) is then pressed onto the substructure, trimmed at the margins, and fired at the same temperature. The heat treatment draws the "G" layer of gold into the capillaries. (A typical framework is shown in Figure 1.) The manufacturer recommends applying a thin layer of bonding agent called Capbond prior to applying porcelain.

This technology was developed 12 years ago and has been commercially available for the last 10 years. The manufacturer claims several advantages for it. First, the substructure is purported to be biocompatible and corrosion resistant. Second, it is reported to be extremely strong, so margins can be reduced to a thickness of only 0.1 mm. The manufacturer recommends metal margins be used (see Figure 2 which is a mirror view of a finished Captek restoration showing the circumferential margins). Because the substructure has a gold color and lacks a gray oxide coating, subgingival facial margins appear esthetic. Interestingly, some research indicates that a "bacterial inhibition zone" is present at the Captek substructure margins.¹ Plaque accumulations have been observed to be reduced by 90% in these areas compared to adjacent natural teeth. The manufacturer also claims that the stress-free construction of Captek substructures make the finished restoration more resistant to impact, load, and fatigue. Finally, the Captek company claims that the budget projections of laboratories using this material are simplified because the material itself is price stable (assuming gold remains less than \$400/Troy ounce).

Naturally, as with any technology, substantial research must be performed to confirm or refute the many advantages claimed for the Captek system by its manufacturer. It should be noted that long-term clinical studies have not yet appeared in refereed journals that evaluate the performance of the Captek system. When they do, clinicians and technicians will be able to assess the value and clinical success of the product.

Manufacturer/Source:

Captek, a Division of Precious Chemicals, Ltd.
250 Altamonte Commerce Blvd
Altamonte Springs, FL 32714
(800) 921-2227
(407) 889-8891
(407) 889-8893 FAX
www.captek.com

Reference

1. Goodson M, Shohert I, Imbert S, Som S. Captek alloy reduces dental plaque accumulation [Abstract]. J Dent Res 1999;78:262.

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What's the Best Product? (Originally published in Jan 2003)

Question: The doctors at our clinic want to switch from the composite we have been stocking to a new one. What's the best one to buy?

Answer: DIS commonly receives this type of question and, of course, it isn't restricted to composites. Sometimes, people want to know what the best amalgam is, or resin cement, or bonding agent. Although it sounds like a simple question, it really isn't. Let's see why, by looking at the question you asked: what's the best composite to buy? We should probably start by putting the word "best" in quotation marks. It is often very challenging to what the "best" product is for you or your clinic, and the reasons are many. First, it can be difficult to differentiate between different brands by testing them. Let's take amalgam as an example. The vast majority, if not all, amalgam brands on the market today are high-copper alloys, and they exhibit physical properties that easily exceed the minimum values required by pertinent dental standards. They also all generally perform acceptably in the mouth. The same situation is seen with the majority of resin composites on the market. Their formulations do not differ dramatically from each other, and so they generally perform acceptably in the mouth. So that's one problem we encounter when trying to identify the "best" product. The other problem is that the kind of product evaluations you see in Dental Items of Significance as well as in other product evaluation newsletters, are usually based on physical property testing (how the product performs in the laboratory) and limited clinical-user testing. Although these types of testing yield useful information and can help weed out clearly inferior products, the true measure of a dental material's performance is how it does over a number of years in the mouth. This is the true test of a product because it is being tested in the environment where it is used. Intraorally, it is subjected to constant moisture, intermittent drying, occlusal forces from all directions and of different degrees, bacterial attack, and a host of other factors that can potentially affect its ability to perform well. Unfortunately, long-term clinical trials, such as those carried out over a three- to five-year period, are very rarely available to the potential buyer because most companies do not conduct them prior to marketing. The reason they don't is that trials like these take too long and are often prohibitively expensive.

So what is a person supposed to base his/her decision on? I'd suggest three considerations. First, potential buyers should review product literature and available published studies to ensure that the product does, at least, meet (and hopefully exceed) minimum standards required of it by such organizations as the American National Standards Institute (ANSI), International Organization for Standardization (ISO), and American Dental Association (ADA). Second, you should determine what type of clinical cases you intend to treat and what clinical uses you have for the product. For example, if you are in a military practice where your patients are of a narrow age range and you anticipate doing very little

cosmetic work (e.g., diastema closures, direct veneers), you would probably want a resin composite with fewer shades and a less complicated shade guide such as Prodigy (SDS/Kerr), Palfique Estelite (Tokuyama/J. Morita), or Ælite LS (Bisco). If your needs are the opposite (many shades, detailed shade guide), you may want to select Esthet-X (Dentsply/Caulk), Point 4 (SDS/Kerr), or the Venus Master's Kit (Heraeus Kulzer). Finally, you should consider the price. Potential buyers should be aware that prices for different brands of a particular dental material can vary significantly. This is one factor that DIS takes into account when evaluating new products.

So, as you can see, finding the "best" product can be difficult and should be done with care. Always remember, it is can frustrating being the first practitioner in your area to buy and use a new material. It's wise to let others do the "testing" for you. You can then benefit from their experiences and possible future product modifications. DIS is always available, however, to make the selection process easier. Please call us for information when you are considering a new product purchase.

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The Frustrations of Making Provisionals: Have Manufacturers Made it Any Easier? (Originally published in May 2003)

Question: Are there any new materials on the market for making temporary crown and bridges?

Answer: Over the last few years, dental product manufacturers have spent a great deal of time and money developing provisional (i.e., temporary) crown and bridge products that are easier to use and have better physical properties. Standard acrylic-type provisional products have been the mainstay of dentistry since the 1930s and have, for the most part, worked satisfactorily. Products such as Jet Tooth Shade (Lang), Snap (Parkell), and Trim II (HJ Bosworth) are popular because of their low cost, acceptable esthetics, and versatility. These products come as two-part systems (a powder and a liquid) that are mixed immediately before use. Generally, they are best used for making short-term provisionals that will be needed for only a few months at most. They have several disadvantages, however. Among their drawbacks are an objectionable odor, significant shrinkage, heat production during setting, and a tendency to discolor. To address these shortcomings, manufacturers have begun producing provisional products that are bis-acryl resin composites. These materials shrink less (and therefore fit better), give off less heat, and can be polished at chairside. They don't polish to as high a luster as the acrylics and often have an air-inhibited layer following setting, which needs to be removed prior to finishing and polishing. They also tend to be brittle, so close attention must be paid to the occlusion if they are used to make long-span bridges. Many of these products are packaged in cartridges and mixed/dispensed using an automix gun. The bis-acryl composites polymerize (i.e., harden) in one of several ways: by chemicals (e.g., Integrity, Dentsply/Caulk; Temphase, SDS/Kerr; Protemp 3 Garant, 3M ESPE); by visible light (Revotek LC, GC America); or by both chemicals and light (Unifast LC GC America). These products generally perform very well, and differences among them primarily center around setting and working times, cost, and packaging form. For guidance when purchasing a provisional material, please contact DIS.

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