Photo-Activated Oral Disinfection
Kills 99.99% of bacteria in seconds.
Photo-activated Disinfection

The new Little Sister Photo-Activated Disinfection system from Eschmann has been developed to help both the dentist and dental hygienist improve the level of care they are able to provide to their patients, providing a genuine advance in minimal invasive dental treatment.

The advanced technologies at the heart of PAD, developed over a number of years, is proven to provide High Level Disinfection, eliminating 99.99% of all species of oral bacteria, on demand and in seconds, during the treatment of root canals, periodontal disease, peri-implantitis and caries.

Little Sister PAD offers a new standard in dental care, providing a less stressful, less painful experience for the patient, whilst significantly increasing the levels of treatment success, without the risk of side effects.

Enjoy Complete Confidence

Little Sister PAD technology has been fully tried and tested, supported by an extensive list of peer-reviewed, published microbiological and clinical studies*.

It provides consistent, fast, effective and simple disinfection of the following, with no side effects:

- Root canals
- Periodontal pockets
- Peri-implantitis
- Carious lesions

*Visit the PAD web site for full details of clinical case studies and references. www.eschmann.co.uk/pad
Little Sister PAD effectively kills bacteria found in root canals, periodontal pockets, peri-implantitis and carious teeth. Some of these bacteria include:

- Actinomyces
- Lactobacillus
- Veillonella
- Prevotella intermedia
- Peptostreptococcus micros
- Fusobacterium nucleatum
- Porphyromonas gingivalis
- Staphaloccoccus aureus
- E.faecalis
- Candida Albicans
- Total streptococcus incl: Streptococcus mutans
  Streptococcus sobrinus
  Streptococcus intermedius

How PAD works

Little Sister PAD uses dual technologies to achieve High Level Disinfection of the treatment site: a solution of dilute, pharmaceutical grade tolonium chloride (a vital stain) and a red LED light of a specific wavelength (635 nm), designed to activate the solution.

Introduced into the dental soft or hard tissue, the tolonium chloride solution selectively targets and tags all bacteria. When activated by the red light emitted from the PAD handset it releases singlet oxygen which ruptures the cell membranes of bacteria, killing them in seconds*

Little Sister PAD eliminates 99.99% of all bacteria and, unlike other methods of disinfection*, does not affect any other normal tissue nor does it stain the gingivae or restorations. Furthermore, PAD does not encourage the development of any resistant species.

(*PAD is tested and proven to achieve a minimum 10^4 log reduction in CFU's)

What does PAD treat?

User comments

"According to my clinical experience, the Little Sister PAD Photo Activated Disinfection process is an effective technology to achieve consistent disinfection in root canal therapy. Marrying the PAD technology with state of the art mechanical and chemical root canal preparation and disinfection technologies may raise the predictability of one session treatments even in CAP cases."

Professor Liviu Steier

"Little Sister PAD is a cost effective and profitable way to treat periodontal disease. It has revolutionized the way the practice works and has enabled us to achieve highly predictable results even in previously unsuccessful or complex cases. In my opinion it works better than any other antimicrobial adjunct currently available."

Phil Lucas
Senior Hygienist, Liverpool, Merseyside
PAD applications

Endodontics
Disinfection of root canals is vital for long-term restorative success. Indeed, inability to guarantee disinfection is a very significant factor in the high level of endodontic treatment failure*. Little Sister PAD is particularly useful in endodontics*. It simplifies the process and is more effective in disinfecting the complex anatomy of root canals. Also, if the apex is breached, treatment may continue, as PAD solution is completely benign, unlike more aggressive conventional agents such as hypochlorite.

Periodontal therapy
The cleaning of periodontal pockets and the elimination of periodontal pathogens is particularly difficult as mechanical debridement cannot guarantee complete removal of bacterial contaminants.

The activation of photosensitisers by red light has been shown to eliminate the pathogens more successfully than the use of local and systemic antimicrobials. The process is simple to carry out and in conjunction with scaling and root planning offers long term success.

Caries treatment
Little Sister PAD can be used in all carious lesions* and during fissure sealing and crown preparations. Little Sister PAD is versatile and cost effective compared to other techniques.

For further information visit www.eschmann.co.uk/pad/apps

“Speeds up the process of root canal treatment. A totally different way to treat caries. Patients love it!”
Dr I Wright
Gwent

“Great publicity benefits to the practice”
Dr A Davenport
Warwicks

“Re-treatment of endo cases with resolution. No need for sodium hypochlorite. Closing of deep pockets.”
Dr J Rawcliffe
North Yorks

“The confidence of complete disinfection.”
Dr S Bonsor
Aberdeenshire
Patient benefits

- Reduced treatment time, increasing the prospect for completion of treatment within a single visit
- Significantly reduces the risk of losing teeth
- Less complex treatment of periodontal pockets
- Less need for aggressive antimicrobials and systemic antibiotics
- Less trauma for children and dental phobics
- Requires less time to complete successful root canal treatments
- Accelerates healing process in gum disease
- Preserves tooth structure during cavity preparation
- Less risk of pulpal exposure in treating deep decay
- Reduces likelihood of implant failure

Practitioner benefits

- Reduces treatment time, increases profitability
- Improves the prospect for single visit treatment
- Helps improve the rate of healing
- Total disinfection of the treatment area without subsequent recourse to the use of antibiotics
- Helps prevent the loss of supporting tissue in periodontal disease
- Minimally invasive procedure saves trauma to hard tissue and encourages the process of natural remineralisation
- Disinfection of site prior to placement helps save expensive implants
- Helps save implant and surrounding tissue in case of infection
- Return on investment possible within as little as six months.

*For details of clinical studies and application guides, visit: www.eschmann.co.uk/pad*
### Technical Information

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<thead>
<tr>
<th>Specification</th>
<th>Value</th>
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<tbody>
<tr>
<td><strong>Light source</strong></td>
<td>LED</td>
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<tr>
<td><strong>Light wavelength</strong></td>
<td>635 nm</td>
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<tr>
<td><strong>Lamp risk group</strong></td>
<td>2 (IEC 62471:2006)</td>
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<td><strong>Emission time</strong></td>
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<td><strong>Output power</strong></td>
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<tr>
<td><strong>Beam delivery</strong></td>
<td>Optical light guide</td>
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<tr>
<td><strong>Display</strong></td>
<td>LCD</td>
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<tr>
<td><strong>Light activation</strong></td>
<td>Switch on handpiece</td>
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<tr>
<td><strong>External fuse</strong></td>
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<td><strong>Power supply</strong></td>
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<td></td>
<td>Output: 16v DC, 1A</td>
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<td><strong>Operating mode</strong></td>
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<td><strong>Device class</strong></td>
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<td><strong>Electric shock protection</strong></td>
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<td><strong>Device type</strong></td>
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<td><strong>Storage &amp; Transport RH range</strong></td>
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<td><strong>Storage &amp; Transport kPa range</strong></td>
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<td><strong>Enclosure protection</strong></td>
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<td><strong>Weight</strong></td>
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### Ordering Information

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<tr>
<td>Little Sister PAD starter kit*</td>
<td>88-100-51</td>
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<tr>
<td>Little Sister PAD Caries pack - 25 treatments</td>
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<tr>
<td>Little Sister PAD Endo pack - 5 treatments</td>
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<td>Little Sister PAD Endo pack - 25 treatments</td>
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<td>Little Sister PAD Perio pack - 5 treatments</td>
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<td>Little Sister PAD LED Light Guide - 1</td>
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*incl: Little Sister PAD unit; Caries Pack - 25; Endo Pack - 25; Perio Pack - 25; LED Light Guide - 1; Anti-glare paddle - 1; Anti-glare glasses - 1; Mains Power adaptor - 1.