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(54) Title: DISCRETE TUNABLE SENSING ELEMENTS AND COMPOSITIONS FOR MEASURING AND REPORTING STATUS AND/OR PRODUCT PERFORMANCE

(57) Abstract: Discrete sensing elements are described that can be integrated into dental hygiene products and can provide rapid and direct feedback to a user as to oral environmental status and as to the performance of the intended oral care product. Selectively tuned elements can both sense and report relevant information including usage time, adequacy of performance during use, training for better usage, and/or the physical or biological status as can be measured by direct oral contact. Sensing and reporting mechanisms can be tuned for increased or decreased sensitivities. Sensing elements can comprise one or more discrete optical changes, structural changes, or other physical changes to the dental hygiene product as a means of alerting a user of a stimulus. Use of optical reference colors provides a high level of accuracy and objectivity as to the status of a sensing event. Enabling delivery and application compositions and methods are described.

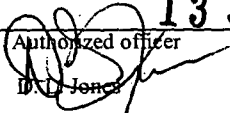


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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER IPC: A61B 10/00(2006.01),5/00(2006.01),8/00(2006.01) USPC: 424/9.7 According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) U.S. : 424/1.11, 1.65, 9.1, 9.7 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) EAST		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
E	US 7,223,270 B2 (ALTSHULER et al) 29 May 2007 (29.05.2007), see entire document, especially, abstract; column 2, lines 11-45; column 3, lines 11-29; column 13, lines 48-63; and columns 14-15, bridging paragraph.	1-148
☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.		
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"O"	document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P"	document published prior to the international filing date but later than the priority date claimed	
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Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (571) 273-3201		Authorized officer  D. L. Jones Telephone No. (703) 308-1235 571/272-7600