

89 Scientific Research Studies using JT-3D Jaw Tracking since 2009

1 A Wilson, P Luck, C Woods, [EA Foegeding...](#) - Journal of Food ..., 2016 - Elsevier
... movement in a minimally intrusive way is explored in this study by comparison with full 3D incisor **tracking** using a **Jaw Tracker (JT-3D)**, Bioresearch Inc., Milwaukee, WI). Comparing the ...
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[\[PDF\] researchgate.net](#)

2 [HTML] [Analysis on mandibular movement using the JT-3D system](#)

주헌송 , 려운김 , 재준변 , 희중김... - Journal of Dental ..., 2020 - synapse.koreamed.org
... This study aims to measure the **mandibular** movement using **JT-3D** system and provide a range of **mandibular** movement that can serve as a good reference for diagnosing the ...
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3 [An overview of the digital occlusion technologies: Intraoral scanners, jaw tracking systems, and computerized occlusal analysis devices](#)

[M Revilla-León](#), DE Kois, JM Zeitler... - Journal of Esthetic ..., 2023 - Wiley Online Library
... (IOSs), the **mandibular** motion of the patient recorded by using an optical **jaw tracking** system, and ... and analysis) Bioresearch **JT-3D** Magnetometry Head frame, **mandibular tracker** NA ...
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4 P Thumati, [J Radke](#), RP Thumati... - Advanced Dental ..., 2021 - adtt.scholasticahq.com
... Each subject was recorded using a magnet-based incisor-point **jaw tracker** coupled to an eight-channel surface electromyograph (**JT-3D** connected with BioEMG III, Bioresearch ...
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5 [PDF] [Chewing movements altered in the presence of temporomandibular joint internal](#)

[JC Radke](#), RS Kull, MS Sethi - 2014 - researchgate.net
... Figure 2 The **JT-3D** magnetic incisor-point **tracker** and ... a magnetic incisor-point **tracker** (Model **JT-3D**; BioResearch, Inc., ... the lower incisors, and the **tracking** sensor array was placed on ...
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6 [PDF] [Digital Solutions for Acute Stomatognathic Trauma](#)

SI Patel - assets.doctorlogic.com
... of her chin pushed her **jaw** back. Doppler sonography and ... Intuitive software allows interpretation of the BioJVA and **JT-3D** ... click in the review mode, while **monitoring** the magnified ...
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7 [JT-3D system 을 이용한 하악의 운동 분석](#)

송주헌 , 김려운 , 변재준 , 김희중 , 허유리 , 이경제 - 구강회복응용과학지, 2020 - dbpia.co.kr

... the **mandibular** movement using **JT-3D** system and provide a range of **mandibular** movement
... A simple and inexpensive system for **monitoring jaw** movements in ambulatory humans. J ...
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8 [PDF] [TMJ internal derangements alter the speech motions of patients compared to asymptomatic control subjects.](#)

[P Kadamati](#), [RS Kull](#), [J Radke](#) - ... Dental Technologies & ..., 2021 - [adtt.scholasticahq.com](#)
... **JT-3D** incisor-point **tracker** ... **JT-3D** incisor-point **tracker** found that the presence of the magnet did not significantly disrupt normal speech and that the **jaw tracker** may be used to study **jaw** ...
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9 [HTML] [Mastication Analysis of patients with **mandibular** Kennedy's Class I situation with or without modifications, before & after treatment partial denture insertion—an ...](#)

[M Ayinala](#), [S Poovani](#), [P Thumati](#)... - Advanced Dental ..., 2020 - [adtt.scholasticahq.com](#)
... The muscle activity and masticatory efficiency were then evaluated using Bio EMG III and a **JT-3D** Incisor-point **Tracker** with BioPAK software (Table 2). The masticatory movement ...
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10 [Biometrically-Driven Orthodontic Treatment Using the Biocreative Orthodontic Strategy \(BOS\)](#)

[SH Kim](#) - Handbook of Research on T-Scan Technology ..., 2025 - [igi-global.com](#)
... that **mandibular** functional ... **mandibular jaw tracking** (the **JT- 3D** EGN system), that was used in case 2 (see Figure 28). The **JT- 3D** EGN can visualize and quantify each **mandibular** ...
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11 [PDF] [wiley.comFull View](#)

[Facial and **mandibular** landmark **tracking** with habitual head posture estimation using linear and fiducial markers](#)

[FH Saad](#), [TH Farook](#), [S Ahmed](#), [Y Zhao](#)... - Healthcare ..., 2024 - Wiley Online Library
... operator, establishing the baseline for reference **tracking**. The hard tissue measurements for lateral excursion were captured using an electrognathograph (**JT-3D**; BioResearch, USA) to ...
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12 [PDF] [academia.edu](#)

[Interrelations among physical characteristics, sensory perception and oral processing of protein-based soft-solid structures](#)

[E Çakır](#), [CJ Vinyard](#), [G Essick](#), [CR Daubert](#), [MA Drake](#)... - Food ..., 2012 - Elsevier
... **jaw** movement amplitudes, durations, and velocities were simultaneously collected by a three-dimensional **jaw tracking** system (**JT-3D**). ... The study showed that muscle activity and **jaw** ...
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13 [HTML] [scholasticahq.com](#)

[HTML] [Masticatory Analysis Of An Edentulous Patient, Case Report](#)

K Al-Sulaihi, P Thumati, S Poovani... - ... Dental Technologies & ..., 2018 - adtt.scholasticahq.com
... The patient's **jaw** motions and muscle activity chewing 'Peanut Chikki,' (a mixture of ground peanuts in Jaggery liquid that is tough but not brittle), were recorded with a **JT-3D jaw tracker** ...
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14 D Nandeeshwar, N Arora, [T Kumar](#) - Journal Of Applied Dental and ..., 2015 - joadms.org
... **Jaw Tracking (JT-3D)** **JT-3D**, or "**Jaw Tracking**", allows the clinician to analyze **jaw** ... A small magnet, attached to the labial surfaces of the **mandibular** incisors, is **tracked** by an array of ...
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15 [TMJ symptoms reduce chewing amplitude and velocity, and increase variability](#)
[JC Radke](#), GJ Kamyszek, RS Kull, GR Velasco - CRANIO®, 2019 - Taylor & Francis
... while their **mandibular** movements were **tracked** by a **JT-3D** magnetic **jaw tracker** (BioResearch ...
bilaterally quiet TMJ conditions, no **mandibular** deviations or deflection at wide opening, ...
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16 [CITATION] Using **JT-3D (jaw tracker)** for the acquisition of tongue movement. Department of Speech-
Language Pathology, University of Toronto
Y Yunusova, V Giannakeas, J Green - 2010
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17 [\[PDF\] researchgate.net](#)
[PDF] [Internal Derangement of the TMJ Alters Gum Chewing Amplitude and Velocity# 1130](#)
[JC Radke](#), GJ Kamyszek - researchgate.net
... Objective: To test the null hypothesis that the **mandibular** movements during gum chewing
... left and right sides while their movements were **tracked** by a magnetic **jaw tracker** (n = 60). A ...
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18 [\[PDF\] researchgate.net](#)
[Average chewing pattern improvements following Disclusion Time reduction](#)
[RB Kerstein](#), [J Radke](#) - CRANIO®, 2017 - Taylor & Francis
... electrognathographic (**jaw tracking**) ... 1 **JT-3D** headset with eight bilateral **mandibular**
movement sensors that record motion patterns made by a magnet anchored to the **mandibular** ...
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19 [\[PDF\] nature.com](#)
[Predictive modelling of freeway space utilising clinical history, normalised muscle activity, dental occlusion, and **mandibular** movement analysis](#)
[TH Farook](#), TM Haq, [L Ramees](#), [J Dudley](#) - Scientific Reports, 2024 - nature.com
... device-dependent factors in **jaw tracking** and AI-based decisions ... (EGN) (**JT-3D**; BioResearch Associates Inc). Each activity ... of the variations in **jaw** movement while transitioning across ...
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[J RADKE](#) - researchgate.net

... Previous methods have included **jaw tracking**, particle size analysis (efficiency) and ...

The advantages of **jaw tracking** are; 1) the ease of measurement and 2) its complete ...

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P Thumati, RP Thumati... - ... Dental Technologies & ..., 2022 - adtt.scholasticahq.com

... motions were recorded with the **JT-3D** magnetic incisor-point **tracker**, their muscle activity ...

Note that the temporalis muscles are dominant due to the more retruded maxillo-**mandibular** ...

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22 [Chewing movements altered in the presence of temporomandibular joint internal derangements](#)

[JC Radke](#), RS Kull, MS Sethi - Cranio®, 2014 - Taylor & Francis

... -point **tracker** (Model **JT-3D**; BioResearch, Inc., Milwaukee, WI, USA). A magnet was fixed

in the subject's labial vestibule anterior to the lower incisors, and the **tracking** ... of **mandibular** ...

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23 [\[HTML\] sciencedirect.com](#)

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[TH Farook](#), [L Ramees](#), [J Dudley](#) - The Journal of Prosthetic Dentistry, 2025 - Elsevier

... Soft tissue **jaw** movement was **tracked** by SnP using an AI-based facial landmark **tracking** ...

a single operator using an electrognathograph (**JT-3D**; BioResearch Associates Inc) which ...

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[\[PDF\] Camila Heitor Campos, Ph. D, b Renata Cunha Matheus Rodrigues Garcia, Ph. D c](#)

KM de Andrade, BFM Alfenas - 2017 - academia.edu

... **Jaw** chewing movements during Optocal mastication and the range of **mandibular** movements

were evaluated using the **JT-3D** ... Data were recorded using the **jaw tracking** method. ...

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[Characterization of mandibular movement during speech in the presence of oral articulatory perturbation](#)

[KA Mays](#), [M Stone](#) - archives of oral biology, 2011 - Elsevier

... movement during speech.1, 2, 3, 4, 5 Edwards and Harris used an opto-electric **jaw tracking**

... used to record **mandibular** movement during speech production. The **JT-3D** records **jaw** ...

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B Sutter, C Rettie - [adtt.scholasticahq.com](#)

... relative timing between groups and since the small delay caused by the **jaw tracker** is ...

Associates, Inc., the manufacturer of the **JT-3D** and BioEMG III. They receive no monetary value ...

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27 [식도암 세기조절방사선치료와 용적세기조절회전치료에 대한 Jaw-Tracking 의 유용성 평가](#)

오현택 , 유순미 , 전수동 , 김민수 , 송흥권 , 윤인하... - 대한방사선치료 ..., 2019 - dbpia.co.kr

... Purpose : To evaluate the effectiveness of **Jaw-tracking**(JT) technique in Intensity-... treatment planning was set up with **Jaw-tracking** technique(JT) and Non-**Jaw-tracking** technique(NJT), ...

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[\[CITATION\]](#) The Ideal TM position

SR Olmos - 2023 - Retrieved February

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[\[PDF\]](#) [Food & Function](#)

P Morell, A Tárrega, EA Foegeding, S Fisman - [academia.edu](#)

... **tracked** by using an array of sensors fit as a unit on the head to record the vertical,

anterior-posterior and lateral components of **jaw** ... **JT-3D Jaw Tracker** was employed to **track** the **jaw** ...

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P Girouard - Gen Dent, 2019 - [researchgate.net](#)

... right side of the **mandibular** dental arch (Fig 2... **jaw** movements were accompanied by sounds on opening and closing. To investigate, the dentist used a combination of **jaw tracker** (**JT-3D**...

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30 <https://adtt.scholasticahq.com/article/89967-changes-in-masticatory-function-after-replacing-a-single-missing-lower-1st-molar-with-an-implant-supported-crown>

Thumati P, Thumati RP, Radke J. Changes in Masticatory Function after Replacing a Single Missing Lower 1st Molar with an Implant-Supported Crown. *Adv Dent Tech*. Published online November 16, 2023.

based **JT-3D jaw tracker**, BioEMG III electromyograph and analyzed with the BioPAK version 8.80 computer program (BioResearch Associates, Inc. Milwaukee, WI USA). See Figure 8. ...

31 [\[PDF\]](#) [scholasticahq.com](#)

[\[PDF\]](#) [Improvements in Appearance and Masticatory Function After Full Mouth Restorations with Implant-supported Prostheses](#)

RP Thumati, P Thumati, [RB Kerstein...](#) - Advanced Dental ..., 2024 - [adtt.scholasticahq.com](#)
... measured with incisor point **jaw tracking** (EGN) was statistically ... sional incisor point **jaw tracking** (Electrognathography EGN), ... The **JT-3D** sensor array properly placed on a subject (B). ...
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[Variables associated with jaw clicking in a south Australian population: A cross-sectional study](#)
[TH Farook](#), [L Ramees](#), [J Dudley](#) - Oral, 2024 - [mdpi.com](#)
... movements were recorded using a digital electrognathograph (**JT-3D**; BioResearch ...
electronic **jaw tracking** systems and multiple deep learning software to generate **jaw** movement ...
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[G Paiva](#) - [researchgate.net](#)
... **jaw** mobility and joint sounds are measured with poor reliability and the inter-rater agreement is only marginal at best. Thus, JVA and **jaw tracking** ... using the **JT-3D** incisor-point **tracker** by ...
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[J Radke](#), [P Kadamati...](#) - ... Dental Technologies & ..., 2020 - [adtt.scholasticahq.com](#)
... **tracking** together with their simultaneously recorded electromyographic records that were routinely used to evaluate the masticatory function of TMD patients (**JT-3D** ... by the **jaw tracker** is ...
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35 [Mastication and jaw motion of partially edentulous patients are affected by different implant-based prostheses](#)

[T Gonçalves](#), [CH Campos...](#) - Journal of Oral ..., 2014 - Wiley Online Library
... **Mandibular** movements were evaluated by a **jaw-tracking** kinesigraph device (**JT-3D3**)
17 in two distinct situations: the range of **mandibular** movements and the **jaw** motion during ...
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... **jaw** mobility and joint sounds are measured with poor reliability and the inter-rater agreement is only marginal at best. Thus, JVA and **jaw tracking** ... using the **JT-3D** incisor-point **tracker** by ...
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[Tongue movements and their acoustic consequences in amyotrophic lateral sclerosis](#)

[Y Yunusova](#), [JR Green](#), L Greenwood, [J Wang](#)... - Folia Phoniatrica et ..., 2012 - karger.com
... Tongue movements were collected using **JT-3D**. This electromagnetic system is designed to **track** ... : adaptation of a magnetic **jaw tracking** system. Speech Commun 2006; 48: 463– 473. ...
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[38 RB Kerstein](#), [J Radke](#) - Advanced Dental Technologies & ..., 2019 - adtt.scholasticahq.com
... BioResearch Associates loaned a **JT-3D jaw tracker** (Electrognathograph) & BioEMG III electromyograph for all chewing function and muscle physiology recording procedures. ...
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[Assessment of treatment response to splint therapy and evaluation of TMJ function using joint vibration analysis in patients exhibiting TMJ disc displacement with ...](#)
J Devi, [M Verma](#), [R Gupta](#) - Indian Journal of Dental Research, 2017 - journals.lww.com
... **mandibular** irreversible hydrocolloid impressions made using perforated impression trays. **JT-3D Jaw Tracker** ...) secured on labial surface of **mandibular** anteriors with Stomahesive tape (...
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... The muscle activity and masticatory efficiency were then evaluated using Bio EMG III and a **JT-3D** Incisor-point **Tracker** with BioPAK software (Table 2). The masticatory movement ...
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SX Guo, BY Li, Y Zhang, LJ Zhou, L Liu... - Journal of Oral ..., 2017 - Wiley Online Library
... The **mandibular** movements and the bilateral surface ... the BioPAK **JT-3D jaw tracking** and electromyographic recording system, which includes hardware for combined **jaw tracking** and ...
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E Cakir, H Koc, [CJ Vinyard](#), G Essick... - Journal of texture ..., 2012 - Wiley Online Library
... **Mandibular** movements were collected simultaneously using a **Jaw Tracker (JT-3D)**, BioResearch, ... Movement of the magnet was **tracked** by an array of sensors fit as a unit on the head to ...
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D Mahony - Orthodontic Journal of Nepal, 2014

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[Increased Mastication Smoothness After Disclusion Time Reduction](#)

R Kerstein, B Sutter, J Radke - ... Dental Technologies & ..., 2021 - adtt.scholasticahq.com

... -point **tracker JT-3D** ... **mandibular** incisors in the labial vestibule below contact with the maxillary incisal edges, which simultaneously captured the incisor-point motions from the **JT-3D** ...

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45 [Unbalanced lateral mandibular deviation associated with TMJ sound as a sign in TMJ disc dysfunction diagnosis](#). SE Widmalm, Y Dong, BX Li, M Lin... - Journal of oral ..., 2016 - Wiley Online Library

... The BioPAK system version 7.21 used includes hardware and software for simultaneous recording of **jaw** movements with a **jaw tracker (JT-3D)**, and TMJ vibrations with skin contact ...

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46 [Comparison of physical chewing measures to consumer typed Mouth Behavior](#)

A Wilson, M Jeltama, MP Morgenstern... - Journal of Texture ..., 2018 - Wiley Online Library

... from the point of maximum **jaw** opening were ignored. In a previous study comparing the video **jaw tracking** technique used in this study with the **Jaw Tracker (JT-3D)**, Bioresearch Inc., ...

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[Mastication movements and sleep quality of patients with myofascial pain: occlusal device therapy improvements](#)

LSR Vilanova, TMSV Gonçalves, MJ Pimentel... - The Journal of prosthetic ..., 2014 - Elsevier

... The magnetic **jaw-tracking** method was used to record **mandibular** movements, with a kinesiograph (**JT-3D Jaw Tracker**; BioResearch). The reproducibility of this device was previously ...

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[Full-mouth rehabilitation of upper and lower jaws with computer-guided flapless surgery and immediate loading of implants inserted and mastication analysis](#)

P Thumati, RP Thumati... - Journal of Dental ..., 2023 - journals.lww.com

... Then, the posttreatment mastication analysis was recorded with a magnet-based **JT-3D** incisor-point **tracker**, a BioEMG III electromyograph and analyzed with the Bio-PAK version 8.80 ...

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P Thumati, R Thumati, J Radke - ... Dental Technologies & ..., 2020 - adtt.scholasticahq.com

... Mastication was recorded with a magnet-based **JT-3D** incisor-point **tracker**, a ... **mandibular** removable partial dentures. The authors found that the velocity increased, the **mandibular** ...

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[Masticatory function changes after replacing multiple missing teeth with implant-supported bridges](#)

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... both reported mastication measured with incisor point **jaw tracking** electrognathography (EGN) was ... Incisor-point movements were recorded with a **JT-3D tracker** and simultaneously, the ...

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... recorded for **mandibular** movements using an electrognathograph (**JT-3D**; BioResearch Inc)

... Deep learning-based facial landmark **tracking** or non-invasive hard tissue **tracking** devices, ...

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CL Campbell - 2017 - search.proquest.com

... **tracking** methodology was developed, calibrated, and validated by modifying a magnetic **jaw tracking** ... detected by the **JT-3D** sensors are represented by colors correlating with their ...

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... displays **mandibular** movements using a **jaw tracking** magnet ... out using the model **JT-3D**

Jaw Tracker together with the BioEMG ... a translation force on the lower **jaw** only along its line (or ...

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54 [Comparison of Masticatory Function of Symptomatic Patients and Control Subjects](#)

[J Radke](#), BA Sutter - Handbook of Research on T-Scan Technology ..., 2025 - igi-global.com

... : The **JT- 3D** incisor- point **mandibular tracker** records 3dimensional movements (vertical, antero- posterior, and lateral) of a small magnet temporarily adhered to the **mandibular** incisors ...

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BA Sutter, G Ruiz-Velasco, MS Sethi... - Advanced Dental ..., 2024 - adtt.scholasticahq.com

... The incisor-point 3-dimensional **tracker** used by all contributors was model **JT-3D** produced by ... magnet placed in the labial vestibule and adhered to the **mandibular** incisor teeth. ...

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56 [Caramel as a model system for evaluating the roles of mechanical properties and oral processing on sensory perception of texture](#)

TB Wagoner, PJ Luck, [EA Foegeding](#) - Journal of Food science, 2016 - Wiley Online Library
... Three-dimensional **jaw** movements were collected simultaneously using a **jaw tracking** device (**JT-3D**, BioResearch Inc.). A magnet was affixed to the frontal incisors with adhesive (...
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CF Amaral, GA Souza, MA Pinheiro... - Brazilian dental ..., 2019 - SciELO Brasil
... **Tracked jaw** movements were displayed on a computer screen as three-dimensional spatial coordinates on the frontal, horizontal, and sagittal axes with the BioPack computer program (...
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... A magnetic sensing device that **tracked jaw** movements during mastication was placed on ...
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... Ligamentul sfeno-**mandibular** reglează mișcările mandibulei ... Iar asocierea JVA cu **JT-3D (JVA/JT-3D)** permite înregistrarea ... **JT-3D — Jaw Tracker** -dispozitiv ce înregistrează mișcările ...
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... skull, muscles of the **jaw** would still have a tendency to keep the **jaw** moving in the direction ... for **jaw tracking** include ultrasonic KaVo Arcus Digma, optical Modjaw, electromagnetic **JT-3D**...

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... For example, the calibration of a **jaw tracking** device can be refined to within + 0.1 mm, ... with **JT-3D Mandibular** Electrognathograph and the BioEMG III electromyograph (Figure 24). ...

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... to provide a means of **tracking** the trajectory of the ... **JT-3D™** da BioResearch Company, empregam um mecanismo articulado fixado na cabeça para registrar o movimento **mandibular**. ...

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... velocity of **jaw** movements, predictive variables such as kinematic changes. In this context, electrognathography (EGN), a method that applies the technology of **tracking** ... model **JT-3D®**, ...

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... rate (ESR); and extensive neurophysiological and pathological screening with biometric tools such as surface electromyography (EMG), **jaw tracking**, and mastication analysis. ...

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... **tracking** system (Optotrak, NDI); an aerodynamic measurement system (Biopac Inc.), **JT-3D** (... not with speed of upper lip, lower lip and **jaw** movement. These findings suggest that poor ...

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... B) The BioEMG III records the muscle activity and **JT-3D** magnetic incisor-point **tracker** ...

issues like malocclusion and/or temporomandibular joint dysfunction is reduced, the muscular ef...

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... Bu amaçla kullanılan cihazlardan biri JT-3 boyutlu elektronik çene izleyicisi (**jaw tracker**) cihazıdır. Bu cihaz kesici diş insizal kenarının hareketini üç boyutlu olarak kaydetmektedir. JT-3 ...

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... **jaw tracking** method was used to evaluate **jaw** chewing ... , and the range of **mandibular** movements (sagittal and vertical ... da trajetória **mandibular** utilizando cinesiógrafo (Model **JT-3D**; ...

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... : a **jaw-tracking** system ... **track** the movement of the **mandibular** during mastication. Most food scientists investigating the oral processing behavior have utilized the **jaw-tracker 3D (JT-3D)** ...
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... In den späten 1980-ern entwickelte Bioresearch Associates zusammen mit John Radke den **JT-3D**-Elektrognathographen, der in der Lage war, Unterkieferbewegungen in allen 3 ...

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