

## Digitale Abformung in den unterschiedlichen Fachdisziplinen der Zahnmedizin

# Scanner: Must-have in der Mehrbehandler-Praxis

**Autoren:** PD Dr. Maximiliane Amelie Schlenz, Dr. Alexander Schmidt, Dr. Moritz Benedikt Schlenz, Dr. Nelly Schulz-Weidner, Dr. Sameh Attia, Prof. Dr. Carolina Ganß, PD Dr. Niko Christian Bock, Prof. Dr. Bernd Wöstmann

## Literaturangabe

1. Duret, F. Dental CAD/CAM. J Am Dent Assoc. 1992, 123, 11-2, 14.
2. Mörmann, W.H.; Brandestini, M.; Lutz, F.; Barbakow, F.; Gotsch, T. CAD-CAM ceramic inlays and onlays: a case report after 3 years in place. J Am Dent Assoc. 1990, 120, 517-20.
3. Mormann, W.H. The evolution of the CEREC system. J Am Dent Assoc. 2006, 137 Suppl, 7S-13S.
4. Kontis, P.; Güth, J.F.; Schubert, O.; Keul, C. Accuracy of intraoral scans of edentulous jaws with different generations of intraoral scanners compared to laboratory scans. J Adv Prosthodont. 2021, 13, 316-326.
5. Mangano, F.; Gandolfi, A.; Luongo, G.; Logozzo, S. Intraoral scanners in dentistry: a review of the current literature. BMC Oral Health. 2017, 17, 149.
6. Keul, C.; Güth, J.F. Accuracy of full-arch digital impressions: an in vitro and in vivo comparison. Clin Oral Investig. 2020, 24, 735-745.
7. Schmidt, A.; Klussmann, L.; Wostmann, B.; Schlenz, M.A. Accuracy of Digital and Conventional Full-Arch Impressions in Patients: An Update. J Clin Med. 2020, 9.
8. Schmidt, A.; Rein, P.E.; Wostmann, B.; Schlenz, M.A. A comparative clinical study on the transfer accuracy of conventional and digital implant impressions using a new reference key-based method. Clin Oral Implants Res. 2021, 32, 460-469.
9. Müller, P.; Ender, A.; Joda, T.; Katsoulis, J. Impact of digital intraoral scan strategies on the impression accuracy using the trios pod scanner. Quintessence Int. 2016, 47, 343-9.
10. Rehmann, P.; Sichwardt, V.; Wöstmann, B. Intraoral scanning systems: need for maintenance. Int J Prosthodont. 2017, 30, 27-29.
11. Arakida, T.; Kanazawa, M.; Iwaki, M.; Suzuki, T.; Minakuchi, S. Evaluating the influence of ambient light on scanning trueness, precision, and time of intra oral scanner. J Prosthodont Res. 2018, 62, 324-329.
12. Schmidt, A.; Billig, J.W.; Schlenz, M.A.; Wöstmann, B. The Influence of Using Different Types of Scan Bodies on the Transfer Accuracy of Implant Position: An In Vitro Study. Int J Prosthodont. 2021, 34, 254-260.
13. Schmidt, A.; Schlenz, M.A.; Liu, H.; Kämpe, H.S.; Wöstmann, B. The Influence of Hard- and Software Improvement of Intraoral Scanners on the Implant Transfer Accuracy from 2012 to 2021: An In Vitro Study. Applied Sciences. 2021, 11, 7166.
14. Ender, A.; Zimmermann, M.; Mehl, A. Accuracy of complete- and partial-arch impressions of actual intraoral scanning systems in vitro. Int J Comput Dent. 2019, 22, 11-19.
15. Haddadi, Y.; Bahrami, G.; Isidor, F. Effect of Software Version on the Accuracy of an Intraoral Scanning Device. Int J Prosthodont. 2018, 31, 375-376.
16. Chochlidakis, K.M.; Papaspyridakos, P.; Geminiani, A.; Chen, C.J.; Feng, I.J.; Ercoli, C. Digital versus conventional impressions for fixed prosthodontics: A systematic review and meta-analysis. J Prosthet Dent. 2016, 116, 184-190 e12.
17. Sfondrini, M.F.; Gandini, P.; Malfatto, M.; Di Corato, F.; Trovati, F.; Scribante, A. Computerized Casts for Orthodontic Purpose Using Powder-Free Intraoral Scanners: Accuracy, Execution Time, and Patient Feedback. Biomed Res Int. 2018, 2018, 4103232.
18. Panagiotis, K.; Jan-Frederik, G.; Christine, K. Accuracy of full-arch digitalization for partially edentulous jaws - a laboratory study on basis of coordinate-based data analysis. Clin Oral Investig. 2022.
19. Wöstmann, B.; Schlenz, M.A. Digital versus Analog - Ist die konventionelle Abformung obsolet? Zahnärztliche Mitteilungen. 2020, 12, 38-43.
20. Jordan, A.R.; Micheelis, W. Fünfte Deutsche Mundgesundheitsstudie (DMS V). 2016, Köln: Deutscher Zahnärzte Verlag DÄV.



21. Kreulen, C.M.; Van't Spijker, A.; Rodriguez, J.M.; Bronkhorst, E.M.; Creugers, N.H.; Bartlett, D.W. Systematic review of the prevalence of tooth wear in children and adolescents. *Caries Res.* 2010, **44**, 151-9.
22. Salas, M.M.; Nascimento, G.G.; Huysmans, M.C.; Demarco, F.F. Estimated prevalence of erosive tooth wear in permanent teeth of children and adolescents: an epidemiological systematic review and meta-regression analysis. *J Dent.* 2015, **43**, 42-50.
23. Schlenz, M.A.; Schlenz, M.B.; Wostmann, B.; Jungert, A.; Ganss, C. Intraoral scanner-based monitoring of tooth wear in young adults: 12-month results. *Clin Oral Investig.* 2021.
24. Schlenz, M.A.; Schupp, B.; Schmidt, A.; Wöstmann, B.; Krämer, N.; Schulz-Weidner, N. Kariesdiagnostik mittels Intraoralscanner. *ZWR - Das Deutsche Zahnärzteblatt.* 2021, **130**, 547-553.
25. Metzger, Z.; Colson, D.G.; Bown, P.; Weihard, T.; Baresel, I.; Nolting, T. Reflected near-infrared light versus bite-wing radiography for the detection of proximal caries: A multicenter prospective clinical study conducted in private practices. *J Dent.* 2021 **103**:861.
26. Michou, S.; Benetti, A.R.; Vannahme, C.; Hermannsson, P.G.; Bakhshandeh, A.; Ekstrand, K.R. Development of a Fluorescence-Based Caries Scoring System for an Intraoral Scanner: An in vitro Study. *Caries Res.* 2020, **54**, 324-335.
27. Schlenz, M.A.; Schubert, V.; Schmidt, A.; Wostmann, B.; Ruf, S.; Klaus, K. Digital versus Conventional Impression Taking Focusing on Interdental Areas: A Clinical Trial. *Int J Environ Res Public Health.* 2020, **17**.
28. Schlenz, M.A.; Schmidt, A.; Wöstmann, B.; Ruf, S.; Klaus, K. Invitro comparison of analogue versus digital impressions of the periodontally compromised dentition focused on interdental areas. *Int J Comput Dent.* 2019, **22**, 131-138.