The restoration of facial aesthetics and improvement of quality of life are primary goals for patients with facial deformities requiring maxillofacial prostheses [1].https://doi.org/10.3390/ma16165580 https://www.mdpi.com/journal/materials Materials 2023, 16, 5580 2 of 10 a growing interest in improving the mechanical or physical properties of elastomers by incorporating nano-oxide particles, such as ZnO, TiO2, and CeO2, as fillers in silicone-based elastomers [1,9,10].The physical and chemical properties of silicone elastomers, which are commonly used in facial prostheses, are influenced by factors such as crosslinking within their structure and the type and concentration of fillers in the elastomer network, as well as thermal initiators, other additives, polymerization time, and temperature [4-6].By utilizing unpigmented silicone elastomers and considering various materials, this research aims to contribute valuable insights into the field of maxillofacial prosthetics and enhance our understanding of how these treatments can impact color stability in different clinical scenarios.In this regard, the evaluation of disinfectants and nano-oxides on unpigmented silicone elastomers serves the purpose of achieving better standardization and facilitating data interpretation across various elastomer types.However, to achieve better standardization and facilitate data interpretation across various elastomer types, it is essential to evaluate the effects of disinfectants and nano-oxides on unpigmented silicone elastomers as well.In this regard, the first part of our study aimed to evaluate the antimicrobial properties of incorporating nano-oxides and different disinfectants in unpigmented maxillofacial silicone elastomers [18].Cleaning of silicone prostheses can be achieved through various methods, including mechanical cleaning using manual brushing or hand washing with neutral soap, as well as chemical cleaning with nontoxic disinfectants [14].Furthermore, when selecting a disinfectant, consideration should be given to its antimicrobial properties, compatibility, and inertness, in order to minimize any adverse impact on the physical properties of the material's surface and preserve them to the greatest extent possible.Moreover, mechanical cleaning methods may contribute to the deterioration of the silicone material and may not effectively eliminate all accumulated bacterial colonies [1,13,15].Differences observed in studies investigating the color and mechanical properties of maxillofacial silicones after disinfection can be attributed to variations in study design and the materials used.It was reported that the use of a reflection spectrophotometer as a method has been widely utilized for assessing the color stability of maxillofacial elastomers.On the other hand, colorimeters also provide color measurements in the CIE L*a*b* format, which allows for mathematical analysis and facilitates the comparison of color parameters between different objects [11].This investigation helped to establish the efficacy of these treatments in providing antimicrobial protection to silicone, which is crucial for its clinical application in maxillofacial prosthetics.The second part focused on examining how the incorporation Materials 2023, 16, 5580 3 of 10 of these disinfectants and nano-oxides influenced the color stability of different types of maxillofacial silicone.Studies have reported the colonization of complex microbial biofilms in maxillofacial prostheses.

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