

QSense case studies by pharma industry



Johnson and Johnson

1. Weidman et al., 'Quartz Crystal Microbalance as a Predictive Tool for Drug-Material of Construction Interactions in Intravenous Protein Drug Administration' J. Pharma Sci., 2023, 112 (12), 3154-3163

Pfizer

2. Roffi et al., 'Engineering a ceramic piston pump to minimize particle formation for a therapeutic immunoglobulin: A combined factorial and modeling approach' J. Adv. Manuf. Process. 2023, 5 (1) E10142

Bristol Mayer Squibb

3. Li et al., 'Protein Instability at Interfaces During Drug Product Development, Fundamental Understanding, Evaluation, and Mitigation' Part of the book series: 2021, (AAPS, volume 43)
4. Zheng et al., 'Particle Characterization for a Protein Drug Product Stored in Pre-Filled Syringes Using Micro-Flow Imaging, Archimedes, and Quartz Crystal Microbalance with Dissipation' The AAPS Journal, 2017, 19 (1), 110-116.
5. Li, et al., 'Adsorption of polypropylene oxide-polyethylene oxide type surfactants at surfaces of pharmaceutical relevant materials: effect of surface energetics and surfactant structures' Pharm. Dev. Tech., 2017, 24(1), 70-79.
6. Li et al. 'Mechanistic Understanding of Protein-Silicone Oil Interactions' Pharm Res 2012, 29 (6), 1689-1697.

Amgen

7. Kannan et al., 'Adsorption and Aggregation of Monoclonal Antibodies at Silicone Oil-Water Interfaces' Mol Pharm., 2021, 18 (4)1656-1665

Genentech

8. Patel et al., 'Viscoelastic characterization of high concentration antibody formulations using quartz crystal microbalance with dissipation monitoring' 2008, J Pharm Sci 2009, 98 (9), 3108-3116

AstraZeneca

9. Sebastiani, et al., 'Screening of the binding affinity of serum proteins to lipid nanoparticles in a cell free environment' J. Coll. Interface Sci., 2022, 610, 766-774.
10. Defante et al., 'The Impact of the Metal Interface on the Stability and Quality of a Therapeutic Fusion Protein' Mol Pharm, 2020, 17 (2), 569-578.
11. Protein Adsorption and Layer Formation at the Stainless Steel-Solution Interface Mediates Shear-Induced Particle Formation for an IgG1 Monoclonal Antibody - PubMed (nih.gov), Kalonia, C. Et al, Mol Pharm. 2018 Mar 5;15(3):1319-1331.

Eli Lilly

12. A. Oom et al. 'Surface interactions of monoclonal antibodies characterized by quartz crystal microbalance with dissipation: Impact of hydrophobicity and protein self interactions' J Pharm Sci 2011, 101(2): 519-529