

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT7883001

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	RELEASE OF SECURITY INTEREST
CONVEYING PARTY DATA	
Name	Execution Date
THE TEACHERS RETIREMENT SYSTEM OF ALABAMA	12/20/2021
RECEIVING PARTY DATA	
Name:	SIO2 MEDICAL PRODUCTS, INC.
Street Address:	2250 RILEY STREET
City:	AUBURN
State/Country:	ALABAMA
Postal Code:	36832
PROPERTY NUMBERS Total: 1	
Property Type	Number
Patent Number:	8627970
CORRESPONDENCE DATA	
Fax Number:	(334)321-5005
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.</i>	
Phone:	13345910139
Email:	legal@sio2med.com
Correspondent Name:	SIO 2 MEDICAL PRODUCTS, INC.
Address Line 1:	166 N. WHITEHALL ROAD
Address Line 2:	C/O DONNA PARKER
Address Line 4:	NORRISTOWN, PENNSYLVANIA 19403
ATTORNEY DOCKET NUMBER:	SIO-0003US
NAME OF SUBMITTER:	TAMANIKA BROWN
SIGNATURE:	/Tamanika Brown/
DATE SIGNED:	04/04/2023
Total Attachments: 19	
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**RELEASE OF SECURITY INTEREST
IN INTELLECTUAL PROPERTY COLLATERAL**

This RELEASE OF SECURITY INTEREST IN INTELLECTUAL PROPERTY COLLATERAL (this "Release"), having an effective date of December 20, 2021, is made by **THE TEACHERS' RETIREMENT SYSTEM OF ALABAMA**, an instrumentality of the State of Alabama ("TRS"), in its capacity as Agent ("Agent") for the lenders under that certain Master Loan Agreement dated as of March 15, 2012 (as amended or supplemented from time to time, the "Loan Agreement") by and among SiO₂ Medical Products, Inc., a Delaware corporation ("Company"), TRS, as such Agent for itself and the other lenders party to the Loan Agreement, in favor of Company and Robert S. Abrams (collectively, "Owner").

WHEREAS, Owner entered into that certain Patent Security Agreement dated as of March 15, 2012 (as amended, restated, modified or supplemented from time to time, the "Security Agreement"; capitalized terms used herein but not otherwise defined herein shall have the meanings ascribed to them in the Security Agreement);

WHEREAS, pursuant to the terms and conditions of the Security Agreement, Owner granted to Agent a security interest in all of Owner's right, title and interest in and to the Patent Collateral, which includes without limitation the patents listed in Exhibit A hereto (collectively, the "Released Collateral");

WHEREAS, the Secured Obligations have been paid in full and Agent now desires to release its security interests in the Released Collateral.

NOW THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Owner and Agent hereby agree as follows:

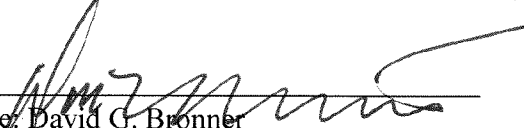
1. Release. Agent (on behalf of itself, its successors and assigns) hereby fully and irrevocably **RELEASES** and terminates, without representation, recourse or warranty whatsoever, the Security Agreement and all of its security interests in and to the Released Collateral, including without limitation the security interests granted under the Security Agreement, and any other agreement or document delivered in connection with the foregoing, and Agent hereby reassigns any and all such right, title and interest (if any) that Agent or any of its successors and assigns may have in, to or under the Released Collateral to the Owner or to the owner that is the record owner of the Released Collateral, as applicable.
2. Further Assurances. Agent shall, at the request and expense of the Company, timely take, or cause to be taken, all appropriate action, do or cause to be done all things necessary, proper or advisable under applicable law, execute and deliver any additional documents and other papers, and perform any additional acts that may be necessary or desirable to evidence the release and termination of Agent's security interests in the Released Collateral, and to consummate and make effective the transactions contemplated by this Release.

3. Counterparts. This Release may be executed by one or more of the parties hereto on any number of separate counterparts, and all of said counterparts taken together shall be deemed to constitute one and the same instrument. Delivery of an executed signature page of this Release by facsimile transmission or electronic transmission (in PDF format) shall be effective as delivery of a manually executed counterpart hereof.

[Signature page follows]

IN WITNESS WHEREOF, the undersigned has executed this Release as of the date first above written.

THE TEACHERS' RETIREMENT SYSTEM OF ALABAMA

By: 
Name: David G. Bronner
Title: Secretary-Treasurer

ACKNOWLEDGED:

SiO₂ MEDICAL PRODUCTS, INC.

By: _____
Name: Robert S. Abrams
Title: President

ROBERT S. ABRAMS

IN WITNESS WHEREOF, the undersigned has executed this Release as of the date first above written.

THE TEACHERS' RETIREMENT SYSTEM OF ALABAMA

By: _____
Name: David G. Bronner
Title: Secretary-Treasurer

ACKNOWLEDGED:

SiO₂ MEDICAL PRODUCTS, INC.

By: Robert S. Abrams
Name: Robert S. Abrams
Title: Chief Executive Officer

Robert S. Abrams
ROBERT S. ABRAMS

**EXHIBIT A
RELEASED COLLATERAL**

Patents				
Country	Patent	Owner	Serial/Patent No.	Filing/Issue Date
United States	Closure with Shield, Stopper, and Pusher, and Method for Making the Same	SiO2 Medical Products, Inc.	8627970	14-Jan-2014
United States	Lubricity Vessel Coating, Coating Process and Apparatus	SiO2 Medical Products, Inc.	13697048	18-Feb-2013
United States	Inspection Methods for PECVD Coatings	SiO2 Medical Products, Inc.	14400079	10-Nov-2014
United States	Vessel, Coating and Inspection Processing Apparatus	SiO2 Medical Products, Inc.	7985188	26-July-2011
United States	Vessel Inspection Apparatus and Methods	SiO2 Medical Products, Inc.	8834954	16-Sep-2014
United States	Vessel Inspection Apparatus and Methods	SiO2 Medical Products, Inc.	8512796	20-Aug-2013
United States	Apparatus and Methods For Transporting A Vessel To And From A PECVD Processing Station	SiO2 Medical Products, Inc.	9572526	21-Feb-2017
United States	Syringe with PECVD Lubricity Layer, Apparatus and Method For Transporting A Vessel to and from a PECVD Processing Station, and Double Wall Plastic Vessel	Pending	15409165	18-Jan-2017
United States	Coating Inspection Method	SiO2 Medical Products, Inc.	9664626	30-May-2017
United States	Vessel Coating Inspection Apparatus and Methods Employing Reflectometry	SiO2 Medical Products, Inc.	61721092	1-Nov-2012
United States	Syringe With Integrated Needle	SiO2 Medical Products, Inc.	9381687	5-Jul-2016
United States	Syringe With Integrated Needle	Pending	15200944	1-Jul-2016
United States	Molding Apparatus, Method and Syringe Produced Using Same	SiO2 Medical Products, Inc.	9345846	24-May-2016
United States	Vial, Tray, and Vial Processing Assembly	SiO2 Medical Products, Inc.	62767496	21-Feb-2013
United States	Syringe With Different Barrel ID	SiO2 Medical Products, Inc.	61827089	24-May-2013
United States	Parenteral Vial Cap	Pending	10327986	25-Jun-2019
United States	Parenteral Vial Cap	SiO2 Medical Products, Inc.	61842478	3-Jul-2013
United States	Parenteral Vial Cap	SiO2 Medical Products, Inc.	61862204	5-Aug-2013
United States	PECVD Coating of Chromatography Vials	SiO2 Medical Products, Inc.	14015820	30-Aug-2013
United States	Cycloolefin Polymer Container With A Scratch Resistant And Anti-Static Coating	Pending	10780021	22-Sep-2020
United States	Scratch Resistant Coatings For Plastic Parenteral Containers	SiO2 Medical Products, Inc.	62120975	26-Feb-2015

Patents				
Country	Patent	Owner	Serial/Patent No.	Filing/Issue Date
United States	Cycloolefin Polymer Container With A Scratch Resistant And Anti-Static Coating	SiO2 Medical Products, Inc.	62198286	29-Jul-2015
United States	Rapid, Non-Destructive Selective Infrared Spectrometry Analysis of Organic Coatings On Molded Articles	SiO2 Medical Products, Inc.	9952147	24-Apr-2018
United States	Needle Siliconization With Controlled Positive Pressure Gas Flow	SiO2 Medical Products, Inc.	9855577	2-Jan-2018
United States	Needle Siliconization With Controlled Positive Pressure Gas Flow	SiO2 Medical Products, Inc.	10258718	16-Apr-2019
United States	Convertible Plungers, Film Coated Plungers And Related Syringe Assemblies	Pending	10561795	18-Feb-2020
United States	Three-Position Plungers, Film Coated Plungers And Related Syringe Assemblies	Pending	10850042	1-Dec-2020
United States	Three-Position Plungers, Film Coated Plungers And Related Syringe Assemblies	Pending	17107241	30-Nov-2020
United States	Dual Actuated Plunger Assembly And Film Coated Plunge	SiO2 Medical Products, Inc.	61887899	7-Oct-2013
United States	Dual Actuated Plunger Assembly And Film Coated Plunge	SiO2 Medical Products, Inc.	61912734	6-Dec-2013
United States	Convertible Plunger Assemblies And Film Coated Plungers	SiO2 Medical Products, Inc.	61938011	10-Feb-2014
United States	Convertible Plungers, Film Coated Plungers And Related Syringe Assemblies	SiO2 Medical Products, Inc.	62048675	10-Sep-2014
United States	Three-Position Plungers, Film Coated Plungers And Related Syringe Assemblies	SiO2 Medical Products, Inc.	62092944	17-Dec-2015
United States	Chemical Vapor Deposition Coating For Laboratory Ware	SiO2 Medical Products, Inc.	14511352	10-Oct-2014
United States	Methods And Apparatuses For Injection Modling Walled Structures	Pending	10639421	5-May-2020
United States	Methods And Apparatuses For Injection Modling Walled Structures	SiO2 Medical Products, Inc.	10899053	26-Jan-2021
United States	Methods And Apparatuses For Injection Modling Walled Structures	SiO2 Medical Products, Inc.	62048725	9-Oct-2014
United States	Methods And Apparatuses For Injection Modling Walled Structures	SiO2 Medical Products, Inc.	62145902	10-Apr-2015
United States	Packaging Improvements For Particulate Control	SiO2 Medical Products, Inc.	62127308	3-Mar-2015
United States	Packaging Improvements For Particulate Control	Pending	62303537	4-Mar-2016
United States	Packaging Improvements For Particulate Control	Pending	62466776	3-Mar-2017

Patents				
Country	Patent	Owner	Serial/Patent No.	Filing/Issue Date
United States	Packaging Improvements For Particulate Control	Pending	62744853	12-Oct-2018
United States	Low Partick Packaging System For Transportation	Pending	62847329	14-May-2019
United States	Packaging Improvements For Particulate Control	Pending	63120052	1-Dec-2019
United States	Product Traceability Master Plan	SiO2 Medical Products, Inc.	62127311	3-Mar-2015
United States	Product Traceability Master Plan	Pending	62303541	4-Mar-2016
United States	Product Traceability Master Plan	Pending	62466795	3-Mar-2017
United States	Product Traceability Master Plan	Pending	62760525	13-Nov-2018
United States	Product Traceability Master Plan	Pending	62993106	23-Mar-2020
United States	Utilizing Quality by Design (QbD) Principles to Develop Plasma Coated Parenteral Containers	Pending	61895699	25-Oct-2013
United States	CVD Process For Depositing Non- Specific Protein Binding Coatings On Articles	SiO2 Medical Products, Inc.	62079032	13-Nov-2014
United States	CVD Process For Depositing Non- Specific Protein Binding Coatings On Articles	Pending	62255555	16-Nov-2015
United States	Controlling The Uniformity of PECVD Deposition	SiO2 Medical Products, Inc.	9764093	19-Sep-2017
United States	Controlling The Uniformity of PECVD Deposition On Medical Syringes, Cartridges, And The Like	SiO2 Medical Products, Inc.	10201660	12-Feb-2019
United States	Controlling The Uniformity of PECVD Deposition	Pending	10363370	30-Jul-2019
United States	Controlling The Uniformity of PECVD Deposition	Pending	16521207	24-Jul-2019
United States	Packaging For High-Purity Solvents	SiO2 Medical Products, Inc.	9981794	29-May-2018
United States	Packaging For High-Purity Solvents	SiO2 Medical Products, Inc.	10807781	20-Oct-2020
United States	Packaging For High-Purity Solvents	SiO2 Medical Products, Inc.	61969756	24-Mar-2014
United States	Plasma or CVD Pre-Treatment for Lubricated Pharmaceutical Package, Coating Process and Apparatus	SiO2 Medical Products, Inc.	9662450	30-May-2017
United States	Plasma or CVD Pre-Treatment for Lubricated Pharmaceutical Package, Coating Process and Apparatus	SiO2 Medical Products, Inc.	14771751	31-Aug-2015
United States	PECVD Coated Pharamaceutical Package, Coating Process And Apparatus	Pending	15585430	3-May-2017
United States	Trilayer Coated Pharmaceutical Packaging	SiO2 Medical Products, Inc.	9554968	31-Jan-2017

Patents				
Country	Patent	Owner	Serial/Patent No.	Filing/Issue Date
United States	Coated Packaging	SiO2 Medical Products, Inc.	14774073	9-Sep-2015
United States	Trilayer Coated Pharmaceutical Packaging	Pending	10016338	10-Jul-2018
United States	PECVD Coated Pharmaceutical Packaging	Pending	16029923	18-Jul-2018
United States	Coated Packaging	Pending	16121046	4-Sep-2018
United States	Electronic Cigarette Having SiOx Barrier Coating	SiO2 Medical Products, Inc.	61914363	10-Dec-2013
United States	Electronic Cigarette Having SiOx Barrier Coating	SiO2 Medical Products, Inc.	62127313	3-Mar-2015
United States	Organo-Siloxane Coatings That Exhibit Lubricious Properties In Cartridge And Syringe Applications	SiO2 Medical Products, Inc.	62128552	5-Mar-2015
United States	Organo-Siloxane Coatings That Exhibit Lubricious Properties In Cartridge And Syringe Applications	Pending	62304438	7-Mar-2016
United States	Organo-Siloxane Coatings That Exhibit Lubricious Properties In Cartridge And Syringe Applications	Pending	62466468	3-Mar-2017
United States	Organo-Siloxane Coatings That Exhibit Lubricious Properties In Cartridge And Syringe Applications	Pending	62696886	12-Jul-2018
United States	Organo-Siloxane Coatings That Exhibit Lubricious Properties In Cartridge And Syringe Applications	Pending	62890561	22-Aug-2019
United States	Passivation, pH Protective or Lubricity Coating for Pharmaceutical Package, Coating Process and Apparatus	SiO2 Medical Products, Inc.	10189603	29-Jan-2019
United States	Passivation, pH Protective or Lubricity Coating for Pharmaceutical Package, Coating Process and Apparatus	SiO2 Medical Products, Inc.	16226463	19-Dec-2018
United States	Functionalized Barrier Coatings	SiO2 Medical Products, Inc.	61946184	28-Feb-2014
United States	PECVD Lubricity Vessel Coating, Coating Process And Apparatus Providing Different Power Levels in Two Phases	SiO2 Medical Products, Inc.	9863042	9-Jan-2018
United States	Coating Method	Pending	14774742	11-Sep-2015
United States	Antistatic Coatings For Plastic Articles	SiO2 Medical Products, Inc.	11066745	20-Jul-2021
United States	Antistatic Coatings For Plastic Articles	SiO2 Medical Products, Inc.	17340844	7-Jun-2021
United States	Antistatic Coatings For Plastic Articles	SiO2 Medical Products, Inc.	61971975	28-Mar-2014
United States	Method For Applying A PECVD Lubricity Layer With A Moving Gas Inlet	Pending	16092124	8-Oct-2018

Patents				
Country	Patent	Owner	Serial/Patent No.	Filing/Issue Date
United States	Method For Applying A PECVD Lubricity Layer With A Moving Gas Inlet	SiO2 Medical Products, Inc.	62013837	18-Jun-2014
United States	Method For Applying A PECVD Lubricity Layer With A Moving Gas Inlet	Pending	62320218	8-Apr-2016
United States	Non-Specific Biomolecule Binding Resistant Surfaces	SiO2 Medical Products, Inc.	62025647	17-Jul-2014
United States	Barrier Coating System With Chemical pH Stability	SiO2 Medical Products, Inc.	62007857	4-Jun-2014
United States	Non-Specific Biomolecule Resistant Surfaces Via Surface Grafting Of Zwitterion-Siloxan Copolymers With Hydroxy Functional Surfaces	SiO2 Medical Products, Inc.	62080427	17-Nov-2014
United States	Non-Specific Biomolecule Resistant Surfaces Via Surface Grafting Of Zwitterion-Siloxan Copolymers With Hydroxy Functional Surfaces	Pending	62269600	19-Nov-2015
United States	Non-Specific Biomolecule Resistant Surfaces Via Surface Grafting Of Zwitterion-Epoxy Copolymers With Amine Functional Surfaces	SiO2 Medical Products, Inc.	62080428	17-Nov-2014
United States	Non-Specific Biomolecule Resistant Surfaces Via Surface Grafting Of Zwitterion-Epoxy Copolymers With Amine Functional Surfaces	Pending	62257269	19-Nov-2015
United States	Vessels, Contact Surfaces, and Coating Inspection Apparatus and Methods	SiO2 Medical Products, Inc.	9272095	30-Mar-2012
United States	Injection Molding Process and Product Produced Using the Same	SiO2 Medical Products, Inc.	9475225	25-Oct-2016
United States	Injection Molding Process and Product Produced Using the Same	SiO2 Medical Products, Inc.	10059047	28-Aug-2018
United States	Detection of Mechanical Stress on Coated Articles	SiO2 Medical Products, Inc.	14003095	4-Sep-2013
United States	SiOx Barrier for Pharmaceutical Package and Coating Process	SiO2 Medical Products, Inc.	14412472	2-Jan-2015
United States	SiOx Barrier for Pharmaceutical Package and Coating Process	SiO2 Medical Products, Inc.	17306621	3-May-2021
United States	Saccharide Protective Coating for Pharmaceutical Package	SiO2 Medical Products, Inc.	9545360	17-Jan-2017
United States	Vial Storage and Transportation Assembly	SiO2 Medical Products, Inc.	14404521	28-Nov-2014
United States	Convertible Plunger With Independently Translating Storage Sealing Section Relative To Liquid Sealing Section And Methods For Assembling The Same In A Medical Barrel	Pending	10765812	8-Sep-2020

Patents				
Country	Patent	Owner	Serial/Patent No.	Filing/Issue Date
United States	Convertible Plungers And Methods For Assembling The Same In Medical Barrel	Pending	16306536	30-Nov-2018
United States	Syringe Plunger Assemblies And Components	Pending	D870278	17-Dec-2019
United States	Convertible Plunger With Independently Translating Storage Sealing Section Relative To Liquid Sealing Section	SiO2 Medical Products, Inc.	62192192	14-Jul-2015
United States	Convertible Plunger With Independently Translating Storage Sealing Section Relative To Liquid Sealing Section	Pending	62269600	18-Dec-2015
United States	Convertible Plunger With Independently Translating Storage Sealing Section Relative To Liquid Sealing Section And Methods For Assembling The Same In A Medical Barrel	Pending	62343536	31-May-2016
United States	Trilayer Coated Pharmaceutical Packaging With Low Oxygen Transmission Rate	SiO2 Medical Products, Inc.	9937099	10-Apr-2018
United States	Trilayer Coated Pharmaceutical Packaging With Low Oxygen Transmission Rate	SiO2 Medical Products, Inc.	10537494	21-Jan-2020
United States	Particle Detection System	Pending	62129705	6-Mar-2015
United States	Particle Detection System	Pending	62304439	7-Mar-2016
United States	Particle Detection System	Pending	62468418	8-Mar-2017
United States	Particle Detection System	Pending	62760492	13-Nov-2018
United States	Protein Deterrent Treatment For Thermoplastic Articles	SiO2 Medical Products, Inc.	62093194	17-Dec-2014
United States	Protein Deterrent Treatment For Thermoplastic Articles	SiO2 Medical Products, Inc.	62114494	10-Feb-2015
United States	PECVD Coating Methods for Shielded or Capped Syringes, Cartridges and Other Articles	SiO2 Medical Products, Inc.	61713435	12-Oct-2012
United States	Vessels and Vessel Coating Methods Involving Barrier Laminates Having a Spacer Layer	SiO2 Medical Products, Inc.	13211917	17-Aug-2011
United States	Cyclic Olefin Polymer Vessels and Vessel Coating Methods	SiO2 Medical Products, Inc.	9878101	30-Jan-2018
United States	Cyclic Olefin Polymer Vessels and Vessel Coating Methods	SiO2 Medical Products, Inc.	15824775	28-Nov-2017
United States	PECVD Coating Methods for Capped Syringes, Cartridges and Other Articles	SiO2 Medical Products, Inc.	9458536	4-Oct-2016
United States	Coating Systems On Plastic Substrates That Inhibit Free Radical- Induced Degradation Of Biologics In Primary Packaging	SiO2 Medical Products, Inc.	62147430	14-Apr-2015
United States	Coating Systems On Plastic Substrates That Inhibit Free Radical- Induced Degradation Of Biologics In Primary Packaging	SiO2 Medical Products, Inc.	62323144	15-Apr-2016

Patents				
Country	Patent	Owner	Serial/Patent No.	Filing/Issue Date
United States	Coating Systems On Plastic Substrates That Inhibit Free Radical- Induced Degradation Of Biologics In Primary Packaging	Pending	62470423	13-Mar-2017
United States	Coating Systems On Plastic Substrates That Inhibit Free Radical- Induced Degradation Of Biologics In Primary Packaging	Pending	62485417	14-Apr-2017
United States	Plasma Treatment With Non-Polymerizing Compounds That Leads To Reduced Biomolecule Adhesion To Thermoplastic Articles	Pending	15536811	16-Jun-2017
United States	Plasma Treatment With Non-Polymerizing Compounds That Leads To Reduced Dilute Biomolecule Adhesion To Thermoplastic Articles	Pending	15570571	30-Oct-2017
United States	Remote Plasma Treatment With A Polar Species That Leads to Reduced Protein Adhesion to Thermoplastic Articles	SiO2 Medical Products, Inc.	62155090	30-Apr-2015
United States	Remote Plasma Treatment With A Polar Species That Leads to Reduced Protein Adhesion to Thermoplastic Articles	SiO2 Medical Products, Inc.	62243392	19-Oct-2015
United States	Multi-Layered Film Coated Plungers And Related Syringe Assemblies	SiO2 Medical Products, Inc.	62159720	11-May-2015
United States	High Pressure Conditioning Method And Device For Enhanced Gas Diffusion And Testing Sensitivity Of In-Line Barrier Inspection Of Containers	SiO2 Medical Products, Inc.	62204155	12-Aug-2015
United States	High Pressure Conditioning Method And Device For Enhanced Gas Diffusion And Testing Sensitivity Of In-Line Barrier Inspection Of Containers	Pending	62375215	5-Aug-2016
United States	High Pressure Conditioning Method And Device For Enhanced Gas Diffusion And Testing Sensitivity Of In-Line Barrier Inspection Of Containers	Pending	62558588	14-Sep-2017
United States	Capped Stretchable Plunger	SiO2 Medical Products, Inc.	62192203	14-Jul-2015
United States	Pharmaceutical And Other Packaging With Low Oxygen Transmission Rate	Pending	11077233	3-Aug-2021
United States	Pharmaceutical And Other Packaging With Low Oxygen Transmission Rate	Pending	62206637	18-Aug-2015
United States	Adjustable Multi-Needle Syringe System	SiO2 Medical Products, Inc.	62195874	23-Jul-2015
United States	Vessels with PECVD Coating(s) Blocking Extractables	Pending	62562014	22-Sep-2017

Patents				
Country	Patent	Owner	Serial/Patent No.	Filing/Issue Date
United States	Vessels with PECVD Coating(s) Blocking Extractables	Pending	62734382	21-Sep-2018
United States	Vessels with PECVD Coating(s) Blocking Extractables	Pending	62886494	14-Aug-2019
United States	Liquid Formulation Of Ranibizumab, Aflibercept, Or Bevacizumab In a Cyclic Olefin Polymer Pharmaceutical Package	Formycon AG SiO2 Medical Products, Inc. Klinge Biopharma GMBH	15777276	18-May-2018
United States	Liquid Formulation Of Ranibizumab, Aflibercept, Or Bevacizumab In a Cyclic Olefin Polymer Pharmaceutical Package	Formycon AG SiO2 Medical Products, Inc. Klinge Biopharma GMBH	62257210	18-Nov-2015
United States	Trilayer Coated Cyclic Olefin Polymer Pharmaceutical Package Suitable for Terminal Sterilization	SiO2 Medical Products, Inc.	15777279	18-May-2018
United States	Trilayer Coated Cyclic Olefin Polymer Pharmaceutical Package Suitable for Terminal Sterilization	SiO2 Medical Products, Inc.	62257208	18-Nov-2015
United States	Primary Containers With Improved Protein Drug Stability And Lower Immune Response	SiO2 Medical Products, Inc.	62329991	29-Apr-2016
United States	Primary Containers With Improved Protein Drug Stability And Lower Immune Response	SiO2 Medical Products, Inc.	62340406	23-May-2016
United States	Primary Containers With Improved Protein Drug Stability And Lower Immune Response	Pending	62487543	20-Apr-2017
United States	Primary Containers With Improved Protein Drug Stability And Lower Immune Response	Pending	62648808	27-Mar-2018
United States	Primary Containers With Improved Protein Drug Stability And Lower Immune Response	Pending	62752007	29-Oct-2018
United States	Primary Containers With Improved Protein Drug Stability And Lower Immune Response	Pending	62891467	26-Aug-2019
United States	Primary Containers With Improved Protein Drug Stability And Lower Immune Response	Pending	62893829	30-Aug-2019
United States	Sample Containers with Improved Barrier and Antiscratch/Antistatic Properties	SiO2 Medical Products, Inc.	62335506	12-May-2016
United States	Sample Containers with Improved Barrier and Antiscratch/Antistatic Properties	Pending	62473777	20-Mar-2017
United States	Sample Containers with Improved Barrier and Antiscratch/Antistatic Properties	Pending	62648778	27-Mar-2018
United States	Sample Containers with Improved Barrier and Antiscratch/Antistatic Properties	Pending	62689541	25-Jun-2018

Patents				
Country	Patent	Owner	Serial/Patent No.	Filing/Issue Date
United States	Sample Containers with Improved Barrier and Antiscratch/Antistatic Properties	Pending	62692038	29-Jun-2018
United States	Trilayer Coating For High Recovery of Fluid	Pending	62468842	8-Mar-2017
United States	Trilayer Coating For High Recovery of Fluid	Pending	62639694	7-Mar-2018
United States	PECVD COATINGS FOR HIGH RECOVERY OF FLUID	Pending	62886469	14-Aug-2019
United States	Polymeric Surface Having Reduced Biomolecule Adhesion To Thermoplastic Articles	Pending	15776728	16-May-2018
United States	Plasma Treatment With Non-Polymerizing Compounds That Leads To Reduced Biomolecule Adhesion To Thermoplastic Articles	Pending	62320246	8-Apr-2016
United States	Plasma Treatment With Non-Polymerizing Compounds That Leads To Reduced Biomolecule Adhesion To Thermoplastic Articles	Pending	62468742	8-Mar-2017
United States	BLOOD SAMPLE COLLECTION TUBE	SiO2 Medical Products, Inc.	11116695	13-Sep-2017
United States	Advanced In-Process Monitoring And Traceability for Primary Container Manufacturing	Pending	62377289	19-Aug-2016
United States	Advanced In-Process Monitoring And Traceability for Primary Container Manufacturing	Pending	62554613	6-Sep-2017
United States	Advanced In-Process Monitoring And Traceability for Primary Container Manufacturing	Pending	62714882	6-Aug-2018
United States	Advanced In-Process Monitoring And Traceability for Primary Container Manufacturing	Pending	62886474	14-Aug-2019
United States	Polymer Process Bags And Methods For Manufacturing The Same	SiO2 Medical Products, Inc.	17420914	6-Jul-2021
United States	Coated Polymer Bags And Methods For Manufacturing The Same	Pending	62482777	7-Apr-2017
United States	Coated Polymer Bags And Methods For Manufacturing The Same	Pending	62500423	2-May-2017
United States	Coated Surfaces, Vessels, And Polymer Bags, And Methods for Manufacturing the Same	Pending	62513071	31-May-2017
United States	Coated Surfaces, Vessels, And Polymer Bags, And Methods for Manufacturing the Same	Pending	62563983	17-Sep-2017

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United States	Coated Surfaces, Vessels, And Polymer Bags, And Methods for Manufacturing the Same	Pending	62591586	28-Nov-2017
United States	Coated Surfaces, Vessels, And Polymer Bags, And Methods for Manufacturing the Same	Pending	62654094	6-Apr-2018
United States	Coated Surfaces, Vessels, And Polymer Bags, And Methods for Manufacturing the Same	Pending	62714854	6-Aug-2018
United States	Polymer Process Bags And Methods For Manufacturing The Same	Pending	62789048	7-Jan-2019
United States	Polymer Process Bags And Methods For Manufacturing The Same	Pending	62846515	10-May-2019
United States	Polymer Process Bags And Methods For Manufacturing The Same	Pending	62864416	20-Jun-2019
United States	Polymer Process Bags And Methods For Manufacturing The Same	Pending	62876800	22-Jul-2019
United States	POLYMER VIALS WITH SUBSTANTIALLY FLAT BOTTOMS AND INJECTION STRETCH BLOW MOLDING METHODS FOR MAKING THE SAME	Pending	17293844	13-May-2021
United States	Flat Bottom Vials And Methods of Manufacturing the Same	Pending	62491681	28-Apr-2017
United States	Flat Bottom Vials And Methods of Manufacturing the Same	Pending	62760542	13-Nov-2018
United States	Sterilizable Pre-Filled Pharmaceutical Packages Comprising A Liquid Formulation of VEGF-Antagonist	Formycon AG SiO2 Medical Products, Inc. Klinge Biopharma GMBH	16615969	22-Nov-2019
United States	Sterilizable Pre-Filled Pharmaceutical Packages Comprising A Liquid Formulation of VEGF-Antagonist	Formycon AG SiO2 Medical Products, Inc. Klinge Biopharma GMBH, Inc.	62510550	24-May-2017
United States	Sterilizable Pharmaceutical Package For Ophthalmic Formulations	Pending	16616310	22-Nov-2019
United States	Sterilizable Pharmaceutical Package For Ophthalmic Formulations	Pending	62510588	24-May-2017
United States	Coated Vessels With Improved Barrier Properties	Pending	62520387	15-Jun-2017
United States	Coated Vessels With Improved Barrier Properties	Pending	62545726	15-Aug-2017
United States	Coated Vessels With Improved Barrier Properties	Pending	62798196	29-Jan-2019
United States	Coated Vessels With Improved Barrier Properties	Pending	62993103	23-Mar-2020

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United States	Blood Culture Bottle	Pending	62544714	11-Aug-2017
United States	Blood Culture Bottle	Pending	62549277	23-Aug-2017
United States	Blood Culture Bottle	Pending	62561977	22-Sep-2017
United States	Blood Culture Bottle	Pending	62562919	25-Sep-2017
United States	Blood Culture Bottle	Pending	62686436	18-Jun-2018
United States	Blood Culture Bottle	Pending	62742727	8-Oct-2018
United States	Blood Culture Bottle	Pending	62850056	20-May-2019
United States	Blood Culture Bottle	Pending	63039641	16-Jun-2020
United States	Container And Cap Assembly For Cryogenic Storage	Pending	17309723	16-Jun-2021
United States	Container And Cap Assembly For Cryogenic Storage	Pending	62780395	17-Dec-2018
United States	Coated Packaging for Fragrances and Cosmetics	Pending	62565708	29-Sep-2017
United States	Coated Packaging for Fragrances and Cosmetics	Pending	62721788	23-Aug-2018
United States	Coated Packaging for Fragrances and Cosmetics	Pending	62797405	28-Jan-2019
United States	Coated Packaging for Fragrances and Cosmetics	Pending	62888582	19-Aug-2019
United States	Coated Packaging for Fragrances and Cosmetics	Pending	63039666	16-Jun-2020
United States	Polymeric Cell Culturing Surface Having High Cell Adhesion	Pending	PCT/US2018/056722	19-Oct-2018
United States	Polymeric Cell Culturing Surface Having High Cell Adhesion	Pending	3079191	19-Oct-2018
United States	Polymeric Cell Culturing Surface Having High Cell Adhesion	Pending	201880068084.9	19-Oct-2018
United States	Polymeric Cell Culturing Surface Having High Cell Adhesion	Pending	18807751.5	19-Oct-2018
United States	Polymeric Cell Culturing Surface Having High Cell Adhesion	Pending	2020522022	19-Oct-2018
United States	Polymeric Cell Culturing Surface Having High Cell Adhesion	Pending	16756525	16-Apr-2020
United States	Polymeric Cell Culturing Surface Having High Cell Adhesion	Pending	PCT/US2018/064617	07-Dec-2018
United States	Polymeric Cell Culturing Surface Having High Cell Adhesion	Pending	3106981	07-Dec-2018
United States	Polymeric Cell Culturing Surface Having High Cell Adhesion	Pending	201880096071.2	07-Dec-2018
United States	Polymeric Cell Culturing Surface Having High Cell Adhesion	Pending	18819250.4	07-Dec-2018
United States	Polymeric Cell Culturing Surface Having High Cell Adhesion	Pending	2021507652	07-Dec-2018
United States	Polymeric Cell Culturing Surface Having High Cell Adhesion	Pending	17268884	16-Feb-2021

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United States	Polymeric Surface Having High Cell Adhesion to Thermoplastic Articles	Pending	62575037	20-Oct-2017
United States	Polymeric Surface Having High Cell Adhesion to Thermoplastic Articles	Pending	62718284	13-Aug-2018
United States	Vessels With PECVD Barrier And Biological Coatings	Pending	62624994	1-Feb-2018
United States	Stretchable Plungers, Plunger Assemblies and Syringes	Pending	29708593	8-Oct-2019
United States	Stretchable Plungers, Plunger Assemblies and Syringes	SiO2 Medical Products, Inc.	62625630	2-Feb-2018
United States	Stretchable Plungers, Plunger Assemblies and Syringes	SiO2 Medical Products, Inc.	62654663	9-Apr-2018
United States	Stretchable Plungers, Plunger Assemblies and Syringes	SiO2 Medical Products, Inc.	62666450	3-May-2018
United States	Stretchable Plungers, Plunger Assemblies and Syringes	SiO2 Medical Products, Inc.	62672934	17-May-2018
United States	Stretchable Plungers, Plunger Assemblies and Syringes	Pending	17046679	9-Oct-2020
United States	Method for Modifying an Optimal Drug Contact Surface that is Commonly Applied to Multiple Products, and the Resulting Products	Pending	62797028	25-Jan-2019
United States	Common Contact Surfaces For Use In The Manufacture, Packaging, Delivery, And Assessment Of Biopharmaceutical Products	SiO2 Medical Products, Inc.	17425361	23-Jul-2021
United States	Method of Manufacturing A Pharmaceutical Container Component With Low Particles	Pending	62754614	2-Nov-2018
United States	Method of Plunger Manufacturing And Resulting Plungers	Pending	62776958	7-Dec-2018
United States	Syringe With Matched Barrel And Plunger	Pending	62788168	4-Jan-2019
United States	Syringe With Matched Barrel And Plunger	Pending	62789366	7-Jan-2019
United States	Syringe With Matched Barrel And Plunger	Pending	62825166	25-Mar-2019
United States	Syringe With Matched Barrel And Plunger	Pending	17311540	7-Jun-2021
United States	Vessels, Containers, And Surfaces Coated With Water Vapor Barrier Coatings or Layers	Pending	62830299	5-Apr-2019
United States	Vessels, Containers, And Surfaces Coated With Water Vapor Barrier Coatings or Layers	Pending	62858625	7-Jun-2019
United States	Vessels, Containers, And Surfaces Coated With Water Vapor Barrier Coatings or Layers	Pending	62860036	11-Jun-2019
United States	COATED SAMPLE COLLECTION TUBES WITH IMPROVED BARRIER PROPERTIES AND SHELF LIFE	Pending	62892913	28-Aug-2019

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United States	COATED SAMPLE COLLECTION TUBES WITH IMPROVED BARRIER PROPERTIES AND SHELF LIFE	Pending	62914142	11-Oct-2019
United States	BLOOD SAMPLE COLLECTION TUBE AND USES THEREOF	Pending	62929668	1-Nov-2019
United States	VIAL	Pending	29712182	6-Nov-2019
United States	CAP, COLLECTION TUBE ASSEMBLY AND COMPONENTS THEREOF	Pending	29712186	6-Nov-2019
United States	LOGO FOR A LABEL OF A VIAL OF A COLLECTION TUBE ASSEMBLY AND A COLLECTION TUBE ASSEMBLY	Pending	29712187	6-Nov-2019
United States	POLYMER VIALS HAVING STANDARD EXTERNAL DIMENSIONS AND REDUCED INTERNAL VOLUME	Pending	62937959	20-Nov-2019
United States	POLYMER VIALS HAVING STANDARD EXTERNAL DIMENSIONS AND REDUCED INTERNAL VOLUME	Pending	63116557	20-Nov-2019
United States	POLYMER VIALS HAVING STANDARD EXTERNAL DIMENSIONS AND REDUCED INTERNAL VOLUME	Pending	63243095	10-Sep-2021
United States	NUCLEIC ACID PRESERVATIVE COMPOSITIONS AND METHODS OF USE	Pending	62948124	13-Dec-2019
United States	NUCLEIC ACID PRESERVATIVE COMPOSITIONS AND METHODS OF USE	Pending	62948748	16-Dec-2019
United States	NUCLEIC ACID PRESERVATIVE COMPOSITIONS AND METHODS OF USE	Pending	62959818	10-Jan-2020
United States	NUCLEIC ACID PRESERVATIVE COMPOSITIONS AND METHODS OF USE	Pending	63011468	17-Apr-2020
United States	REDUCED FRICTION OIL-FREE SYRINGE PLUNGER FEEDING TUBES	Pending	62980474	24-Feb-2020
United States	REDUCED FRICTION OIL-FREE SYRINGE PLUNGER FEEDING TUBES	Pending	63152799	23-Feb-2021
United States	NUCLEIC ACID PRESERVATIVE COMPOSITIONS AND METHODS OF USE	Pending	63012637	20-Apr-2020

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United States	PULSED PLASMA ENHANCED CHEMICAL VAPOR DEPOSITION PROCESS, SYSTEM, AND COATED VESSELS	Pending	63064831	12-Aug-2020
United States	IMPROVED SYRINGE AND GASKET SYSTEMS	Pending	63037565	10-Jun-2020
United States	IMPROVED SYRINGE AND GASKET SYSTEMS	Pending	63197606	7-Jun-2021
United States	ATOMIC LAYER DEPOSITION COATED PHARMACEUTICAL PACKAGING	Pending	63042545	22-Jun-2020
United States	ATOMIC LAYER DEPOSITION COATED PHARMACEUTICAL PACKAGING	Pending	63080675	18-Sep-2020
United States	ATOMIC LAYER DEPOSITION COATED PHARMACEUTICAL PACKAGING	Pending	63109232	3-Nov-2020
United States	ATOMIC LAYER DEPOSITION COATED PHARMACEUTICAL PACKAGING	Pending	63113808	13-Nov-2020
United States	PHARMACEUTICAL PACKAGE THAT REDUCES THE DEGRADATION OF POLYSORBATES IN A DRUG PRODUCT	Pending	63056543	24-Jul-2020
United States	PHARMACEUTICAL PACKAGE THAT REDUCES THE DEGRADATION OF POLYSORBATES IN A DRUG PRODUCT	Pending	63057595	28-Jul-2020
United States	PHARMACEUTICAL PACKAGE THAT REDUCES THE DEGRADATION OF POLYSORBATES IN A DRUG PRODUCT	Pending	63063207	7-Aug-2020
United States	Pharmaceutical Package That Reduces the Degradation of a Drug Product, Including Pharmaceutical Package That Reduces the Degradation of Polysorbates in a Drug Product and/or Reduces Free Fatty Acid Impurities in a Polysorbate-Stabilized Drug	Pending	63087172	2-Oct-2020
United States	PACKAGES COMPRISING ANTI- MICROBIAL COATINGS FOR PREVENTING CONTAMINATION, E.G. AFTER FIRST USE OF THE PRODUCT	Pending	63125231	14-Dec-2020
United States	Compositions for Collection, Transport and Storage of Biological Specimens	Pending	63123099	9-Dec-2020

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United States	METHODS AND SYSTEMS FOR INSPECTING READY-TO-USE PHARMACEUTICAL CONTAINERS FOR PARTICLES AND DEFECTS	Pending	63128002	18-Dec-2020
United States	METHODS AND SYSTEMS FOR INSPECTING READY-TO-USE PHARMACEUTICAL CONTAINERS FOR PARTICLES AND DEFECTS	Pending	63133604	4-Jan-2021
United States	Pharmaceutical Packages that Reduce Binding of Lipid Nano Particles in mRNA Drug Formulations	Pending	63130299	23-Dec-2020
United States	Pharmaceutical Packages that Reduce Binding and Degradation of Lipid Nano Particles in mRNA Drug Formulations	Pending	63134147	5-Jan-2021
United States	Silicone Oil-Free Syringe for Ophthalmic Drug Delivery	Pending	63140783	22-Jan-2021
United States	Drug Primary Package Having Integrated RFID Tag	Pending	63187385	11-May-2021
United States	Drug Primary Package Having Integrated RFID Tag	Pending	63215879	28-Jun-2021
United States	PLUNGERS, PLUNGER ASSEMBLIES AND SYRINGES	Pending	63191909	21-May-2021
United States	Authentication of Pharmaceutical Packages using Rare Earth Doped Nanoparticle Crystals	Pending	63192547	24-May-2021
United States	Authentication of Pharmaceutical Packages using Rare Earth Doped Nanoparticle Crystals	Pending	63213698	23-Jun-2021
United States	Authentication of Pharmaceutical Packages using Rare Earth Doped Nanoparticle Crystals	Pending	63214110	23-Jun-2021
United States	NUCLEIC ACID AND CELL PRESERVATIVE COMPOSITIONS AND METHODS OF USE	Pending	63217754	1-Jul-2021
United States	NUCLEIC ACID AND CELL PRESERVATIVE COMPOSITIONS AND METHODS OF USE	Pending	63222394	15-Jul-2021
United States	Vessels and Methods for Improving the Stability of Lipid Nanoparticle Encapsulated Drugs, e.g. Mrna	Pending	63238053	27-Aug-2021
United States	Methods and Systems for Controlling Flow of Plastic from Hot Runner to Mold Cavity	Pending	63246780	21-Sep-2021