Frederick National Laboratory for Cancer Research, Frederick, MD

**Invitrogen Gel Drying** 

BDP

SOP 22161 Rev. 03

Biopharmaceutical Development Program

# **Table of Contents**

1.0	Purpose1
2.0	Scope1
3.0	Authority and Responsibility1
4.0	Reagents1
5.0	Equipment1
6.0	Procedure2
7.0	Change Summary

## 1.0 Purpose

This procedure describes how to preserve a gel by using Invitrogen Gel dry after all the staining and destaining steps are complete.

#### 2.0 Scope

This procedure is performed by trained Biopharmaceutical Quality Control Personnel who use Invitrogen Gel dry.

#### 3.0 Authority and Responsibility

- 3.1 The Director, Process Analytics/Quality Control (PA/QC) has the authority to define this procedure.
- 3.2 PA/QC is responsible for training laboratory and documenting this training to Biopharmaceutical Assurance (BQA)
- 3.3 PA/QC personnel is responsible for the performance of this procedure.
- 3.4 PA/QC is responsible for reviewing the data and documentation of the results of this procedure
- 3.5 BQA is responsible for quality oversight of this procedure.

## 4.0 Reagents

- 4.1 Direct H2O, MilliQ H2O or equivalent.
- 4.2 INVITROGEN Gel-Dry solution, BDP PN 30041 or BDP approved equivalent
- 4.3 Alternative to the Gel Dry Solution = 30% ethanol (or Menthol) and 5% glycerol.

#### 5.0 Equipment

5.1 INVITROGEN Gel Dryer Kit (Catalog Number NI2200, or equivalent) that consists of a bottom solid square, a plastic frame, and four plastic clamps.

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SOP 22161 Rev. 03

Biopharmaceutical Development Program

- 5.2 Cellophane, BDP PN 20596, or BDP approved equivalent.
- 5.3 Rocker Platform.
- 5.4 25 ml Graduated Cylinder.
- 5.5 Staining Tray.
- 5.6 Gel Knife.

## 6.0 Procedure

Note: Perform all incubation and wash steps at room temperature on a rocker platform

- 6.1 After the staining and destining steps are completed wash the gel three times for ten minutes each in DirectQ H2O. Decant the DirectQ H2O in between each wash.
- 6.2 After decanting the final water wash and approximately 25-50 ml of INVITROGEN Gel-Dry solution (or alternative Gel-Dry Solution) per gel and incubate for 15-20 minutes in a covered staining tray
- 6.3 Place two pieces of cellphone in the Gel Dry Solution with the gels or in a plastic container with deionized water
- 6.4 Place the bottom, solid square, of the gel dryer on a bench liner
- 6.5 Lay one piece of cellophane on the bottom solid square Eliminate any trapped sir bubbles by slowly rubbing a wetted gloved finger over the surface.
- 6.6. Using the gel knife, trim any rough edges excluding wells of the gel.
- 6.7 Gently place the gel in the center of the cellophane sheet. Eliminate any trapped air bubbles by slowly rubbing a wetted gloved finger over the surface
- 6.8 Add 3-5 mL of Gel dry solution to the surface of the gel.
- 6.9 Carefully lay the second sheet of the cellophane over the gels so that no air bubbles are trapped between the cellophane and the gel, or around the edges of he gel.
- 6.10 Smooth out any wrinkles by rubbing gently over the surface with a wetted glove
- 6.11 Place the plastic frame, beveled side up, on top of the cellophane gel sandwich.
- 6.12 Push the plastic clamps onto three edges of the frame.
- 6.13 the frame on the remaining edge to drain excess solution. When draining complete, then install the final clamp.
- 6.14 Set the assembly on a benchtop or in a drawer, gel-side up, to dry. Drying willtake between 12 to 48 hours depending on the humidity and gel thickness. The 1.0 mm mini-gels will take approximately 12 to 18 hours to dry.
- 6.15 When the gel is dry, remove it from the gel dryer, and trim off the excesscellophane.

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BDP	SOP 22161	Rev. 03	
Biopharmaceutical Development Program			

6.16 Attach the gel to the appropriate QC form.

