

## PHARMA DEVILS QUALITY ASSURANCE DEPARTMENT

Document Name: Performance Qualification Appendix 3.4.1 for Lyophilizer		
Equipment/System ID:	Document Number:	
Effective Date:	Version Number: 00	

Trial Run #: \_\_\_\_\_

## Appendix 3.4.1 Leak Rate Test

**Equipment Name :** Lyophilizer **Equipment ID :** ......

**Contents** 

**Observation:** 

Volume V to evacuate	Chamber	•••••	litres
Volume V to evacuate	Condenser	•••••	litres
	Total volume V	•••••	litres

Start time = t <sub>0</sub>	
End time $= t_1$	
Trial duration $(t_1-t_0) = t$ [secondes]	
Starting trial pressure = P <sub>1</sub> [mbar]	
Final pressure = P <sub>2</sub> [mbar]	
Pressure rise $= P_2 - P_1 $ [mbar ]	

Pressure rise = 
$$\frac{V \times (P_2 - P_1)}{t}$$
 = \_\_\_\_ = mbar.1/s

Checkpoint	Acceptance criteria	Observation	Conform	Initials	Deviation
Chamber pressure rise	≤ 26 µbar.l/s or 10 mT/hr	μbar.l/s	Yes / No		

## **Remarks:**

Checked By	Verified By
(Sign. /Date)	(Sign. /Date)