Table 1: Submission Summary

Drug Product Name	
Strength(s)	
Drug Class	
Reference Listed Drug (RLD)	
RLD Applicant	
NDA #	
Date of RLD Approval	
Approved Indication(s)	
Protocol Number	
Study Title	
CRO	Name and Contact information
Study Period	
Objectives	

Table 2: Summary of Clinical Endpoint Bioequivalence Studies

						Mean (LS mean, %) parameters				
Study no.	**Study objective**	**Study design**	**Primary endpoint (s)**	**Treatment (dose, dosage form, dosing regimen, route, application site)**	**Subject no., age: mean (range)**	**Test**	**Reference**	**Placebo/ vehicle**	**90% CI**	**P value**
Study #	Title	For example (e.g.), Placebo controlled parallel	e.g., Change from baseline at visit X (day), Treatment success rate at visit X (day)	Test Reference Placebo/vehicle	# completing (#M/#F) Mean age (range)					Test vs. placebo Reference vs. placebo

Table 3: Summary of Skin Irritation/sensitization/adhesion study(ies)

Study type#1:	**Skin irritation/sensitization/adhesion study**
Study no:	
Title:	
Study Drug:	Test (mg/hr) Reference (mg/hr) Vehicle/placebo Positive control Negative control
During Induction	
Patch application frequency:	e.g., 3 times a week, every day
Patch size	e.g., ½ cut (XX cm^2), whole patch
Application location	e.g., upper shoulder, hip
Simultaneous application on the same subject or parallel	
Application duration	e.g., 48-72 hours for 21 days
Use of overlay or reinforcement tape	Yes/no
Irritation score evaluation time points	e.g., on days 3, 8, 10, 12, 15, 17, 19, 21
Rest period (days)	e.g., 14 days
During Challenge	
Patch application location	e.g., upper shoulder, hip
Application duration	e.g., 48 hours
Removal time	
Sensitization score evaluation time points	e.g., 0, 24, 48, 72 hours after removal
Re-challenge initiation (if any)	e.g., 4 to 8 weeks after the conclusion of the challenge phase
Meet FDA non-inferiority limit	Yes/no
Adhesion Evaluation	
Application duration	e.g., 48-72 hours
Use of overlay or reinforcement tape	Yes/no
Adhesion evaluation time points	e.g., 12, 24, 36, 48, 60, 72 hours after patch application
Meet FDA non-inferiority limit	Yes/no

Study type#2:	**Adhesion data from a PK study**
Study no:	
Title:	
Study Drug:	Test (mg/hr) Reference (mg/hr)
Patch size	e.g., whole patch, ½ size
Application location	e.g., upper shoulder, hip
Application removal time	e.g., X hours after patch application
Adhesion evaluation time points	e.g., 12, 24, 36, 48, 60, 72hours after patch application
Use of overlay or reinforcement tape	Yes/no
Meet FDA non-inferiority limit	Yes/no

Study type#3:	**Adhesion study**
Study no:	
Title:	
Study Drug:	Test Reference
Patch application frequency:	e.g., 3 times a week, every day
Patch size	e.g., ½ cut (XX cm^2), whole patch
Application location	e.g., upper shoulder, hip
Simultaneous application on the same subject or parallel or crossover	
Application duration	e.g., 48-72 hours for 21 days
Use of overlay or reinforcement tape	Yes/no
Adhesion score evaluation time points	e.g., 12, 24, 36, 48, 60, 72
Meet FDA non-inferiority limit	Yes/no

Table 4: Study Center Information

Site Number	Principal investigator and Location	Enrolled (n)	Included in Safety population (n)	Included in MITT population (n)	Included in PP population (n)
01					
02					
03					

Table 5: Study Inclusion/Exclusion Criteria

	Inclusion Criteria
1	
2	
3	

	Exclusion Criteria
1	
2	
3	

Table 6: Prohibited Concomitant Medication List

Drug Class, Type or Name	Examples (NOT comprehensive)	Washout Period (minimum)	Notes

Table 7: Product Information

Product	Test	Reference	Placebo/Vehicle
Treatment ID (if applicable)			
Product Name			
Manufacturer			
Batch/Lot No.			
Manufacture Date			
Expiration Date			
Strength			
Dosage Form			
Dose administered			
Dosing regimen (e.g., BID, QD)			
Route of administration			
Patch size (if applicable)			

Table 8: Study Schedule (for example)

Visit Number	**Visit 1**	**Visit 2**	**Visit 3**	
Visit Type	**Baseline**		**End of Study/ Early Termination**	**Unscheduled Visit**
Visit Day	**Day 1**	**Day 4 (± 4 days)**	**Day 14 (± 4 days)**	
Screening/Consent	X			
Demographics	X			
Medical History	X			
Physical Examination	X			
Urine Pregnancy Test	X			
Inclusion/Exclusion Criteria Review	X			
[Sponsor to add additional items]				

Table 9: Subject Populations (General)

	Per Sponsor			
	Test	**Reference**	**Placebo**	**Total**
Enrolled				
Total Safety population				
Total exclusion from Safety population				
Reason for exclusion from Safety				
No record of first dose				
Total (M)ITT population				
Total exclusion from (M)ITT population				
Reason for exclusion from (M)ITT				
No record of first dose				
No post-treatment data				
[Sponsor to add additional items]				
Total PP population				
Total Exclusion from PP population				
Reason for exclusion from PP				
Enrolled in error				
Lost To Follow-Up				
Non-compliant (dosing)				
Outside visit window				
Randomized in Error				
Restricted Medication				
Others				
[Sponsor to add additional items]				

Table 10: Subject Populations (specific for Nasal Spray Products)

	Per Sponsor			
	Test	**Reference**	**Placebo**	**Total**
Enrolled in Period 1 (Placebo Run-in Period)				
Randomized into Period 2 (Treatment Period)				
Total exclusion from Period 2 (i.e., Placebo responder)				
Total Safety population				
Total exclusion from Safety population				
Total mITT population				
Total exclusion from mITT population				
Reason for exclusion from mITT				
No record of first dose				
No post-treatment data				
[Sponsor to add additional items]				
Total PP population				
Total Exclusion from PP population				
Reason for exclusion from PP				
Enrolled in error				
Lost To Follow-Up				
Non-complaint (Diary)				
Non-compliant (Dosing)				
Outside visit window				
Restricted Medication				
[Sponsor to add additional items]				

Table 11: Subject Populations (specific for Skin irritation/sensitization/adhesion studies)

	Per Sponsor			
	Test	**Reference**	**Placebo**	**Total**
Enrolled				
Total Safety population				
Total PP population for Irritation (PPPI)				
Total exclusion from PPPI				
Reason for exclusion from PPPI				
Adverse events				
Non-compliance				
Voluntary withdrawal				
Patch free for >24 hr				
Other				
[Sponsor to add additional items]				
Total PP Population for Sensitization (PPPS)				
Total exclusion from PPPS				
Reason for exclusion from PPPS				
Adverse events				
Non-compliance				
Patch free for >24 hr				
Other				
[Sponsor to add additional items]				
Total PP Population for Adhesion (PPPA)				
Total exclusion from PPPA				
Reason for exclusion from PPPA				
Adverse events				
Non-compliance				
Other				
[Sponsor to add additional items]				

Table 12: Summary of Protocol Deviations

Protocol Deviation Type	Test	Reference	Placebo	Total
Randomized in error	N, patient no.			
Non-Compliance				
Lost To Follow Up				
Outside Visit Window				
Restricted Medication				
[Sponsor to add additional items]				

Table 13: Summary of Patient Discontinuation/Early Termination from the study

Reason for Discontinuation	Test	Reference	Placebo	Total
Adverse Events	N, patient no.			
Insufficient Therapeutic Response/Treatment Failure				
Lost to follow-up				
Restricted Medication				
Withdrew Consent				
Non-Compliance				
[Sponsor to add additional items]				

Table 14: Demographic Characteristics at Baseline for the Safety Population, (M) ITT Population, and Per-Protocol Population

Demographic		**Test (N)**	**Reference (N)**	**Placebo (N)**	**p value**
Age (years)	Mean ± SD				
	Range				
Gender (N and %)	Female				
	Male				
Ethnicity (N and %)	Hispanic/Latino				
	Not Hispanic/Latino				
Race (N and %)	White				
	Black/African American				
	Native Hawaiian/Other Pacific Islander				
	Asian				
	American Indian/Alaska Native				
	Other				

Table 15: Primary Endpoint Analysis result for a clinical endpoint bioequivalence study

	Per Sponsor		
Primary Endpoint (continuous endpoint)			
	Test	**Reference**	**Placebo**
PP Population			
N			
LS Mean			
90% CI for Test and Reference for **Mean** Response (e.g., test/reference or test-reference)	(XX– XX)		
90% CI for Test and Reference for **Median** Response (e.g., test/reference or test-reference)	(XX – XX)		
mITT Population			
N			
LS Mean			
(Test or Reference) vs. Placebo (p-value)	p=XX	p=XX	

Primary Endpoint (dichotomized endpoint)			
	Test	**Reference**	**Placebo**
PP Population			
N			
Success/Cure rate	XX % (n/N)	XX% (n/N)	
90% confidence interval	(XX, XX)		
mITT population			
N			
Success/Cure rate	XX % (n/N)	XX % (n/N)	XX % (n/N)
(Test or Reference) vs. Placebo (p-value	p=XX	p=XX	

Table 16: Non-inferiority Analysis result for a skin irritation/sensitization/adhesion study

A. Irritation and adhesion scores

Cumulative Irritation	**Test (N)**	**Reference (N)**
MEAN STD MIN MEDIAN MAX		
Cumulative Adhesion	**Test (N)**	**Reference (N)**
MEAN STD MIN MEDIAN MAX		

Parameter	Test (n)	Reference (n)	95% Upper Bound of μ_T-1.25 x μ_R	Pass The Non-Inferiority Test?
Mean Irritation Score Cumulative Irritation Score (irritation + other effects) on days X, X, and 22				
Dichotomized Irritation Analyses	Test (n)	Reference (n)	The 90% CI for the Test minus Reference	95% Upper Bound
Total Irritation score at Day 22=0 (no evidence of irritation)	X% (X/XXX)	X% (X/XXX)		
Total Irritation score at Day 22 =1 (minimal erythema, barely perceptible)	X% (X/XXX)	X% (X/XXX)		
Total Irritation Score at Day 22 =2 (definite erythema)				
Total Irritation Score at Day 22 ≥3 (erythema and papules to strong reaction spreading beyond the application site)				

Parameter	Test LS Mean	Reference LS Mean	95% Upper Bound of μ_T-1.25 x μ_R	Pass The Non-Inferiority Test?
Mean Adhesion Score Cumulative Adhesion Score				
Dichotomized Adhesion Analyses	Test (n)	Reference (n)	The 90% CI for the Test minus Reference	95% Upper Bound
Total Adhesion Score at X Hours =0 (≥ 90% adhered)	X% (X/XX)	X% (X/XX)		
Total Adhesion Score at X Hours = 1 (≥ 75% to <90% adhered)				
Total Adhesion Score at X Hours = 2 (≥50% to <75% adhered)				
Total Adhesion Score at X Hours = 3 (>0% to <50% adhered)				
Total Adhesion Score at X Hours = 4 (0% adhered, patch detached)				

B. Sensitization Analysis

Dichotomized Irritation Analyses	Test (n)	Reference (n)	The 90% CI for the Test minus Reference	95% Upper Bound
Total Irritation 48 hours Post-Application ≥ 2	X% (X/XXX)	X% (X/XXX)		
Total Irritation 72hours Post-Application ≥ 2				

Table 17: Frequency Tables (specific for skin irritation/sensitization/adhesion studies)

A. Irritation Scores (combined irritation and other effect scores) for Per Protocol Population

		Irritation score					
Evaluation day	Product	0	1	2	3	4	5
For example: Day 3	Test (n) Reference (n)	XX (%) XX (%)					
e.g., Day 5							
e.g., Day 8							
e.g., Day 10							

B. Adhesion scores for Per Protocol Population

Adhesion Score	Product	For example Hour 0	e.g., Hour 3	e.g., Hour 6	e.g., Hour 9
0	Test (n) Reference (n)	XX (%) XX (%)			
1	Test (n) Reference (n)				
2	Test (n) Reference (n)				
3	Test (n) Reference (n)				
4	Test (n) Reference (n)				

C. Irritation scores (combined irritation and other effect scores) for Per Protocol Population During Challenge Period/Re-challenge Period

Score during challenge/re-challenge period	Product	30 minutes post removal	24 hours post removal	48 hours post removal	72 hours post removal
0	Test (n) Reference (n)	XX (%) XX (%)			
1	Test (n) Reference (n)				
2	Test (n) Reference (n)				
3	Test (n) Reference (n)				

Table 18: Patch removal or move due to significant skin irritation (specific for skin irritation/sensitization/adhesion studies)

	Irritation score		
Product	Total irritation score (dermal response + other effects) ≥ 3 N (%)	Patches moved or removed due to a significant skin irritation N (%)	Mean days until repeat applications to same site discontinued due to irritation
Test			
Reference			

Table 19: Proportion of subjects with adhesion score of 2 or more and 3 or more per treatment (specific for skin irritation/sensitization/adhesion studies)

Adhesion score	**N**	**Test N (%)**	**Reference N (%)**
<2			
≥2			
<3			
≥3			

Table 20: Summary of Adverse Events

Description	**Test N(%)**	**Reference N(%)**	**Placebo N(%)**	**Total N(%)**
Patients Randomized				
Patients with at least one AEs				
Discontinued study drug due to above AE				
AEs reported				
Mild				
Moderate				
Severe				
Definite Related				
Probably Related				
Possibly Related				
Not Related				
Death				
Serious AE				
[Sponsor to add additional items]				

Table 21: Formulation

Ingredients	Function	Test Amount (mg, %) (e.g., % w/v, %w/w, mg/1 spray)			Reference*	IID limit
		%w/w	%w/v	%v/v		

a. For a waiver of bioequivalence study requirements or for a test product that requires qualitative and quantitative sameness to the RLD

		Test			Reference*	IID limit
Ingredient	Function	%w/w	%w/v	%v/v		

*based on sponsor's reverse engineering

Table 22. OGD Excipient/Impurity Toxicology Data Table

For any inactive ingredient (excipient) proposed at a level that is greater than the amount in an FDA approved product as per the FDA Inactive Ingredient Database the applicant must submit a pharmacology and toxicology summary with full versions of all scientific literature and references used in the summary that support the level of the excipient in the formulation will not change the safety or efficacy as compared to the RLD.

For any impurity, degradant, contaminant or residual that is present in an amount greater than the amount specified in the appropriate ICH guidance the applicant must submit a toxicology summary with full versions of all scientific literature and references used in the summary that support the level of the compound in the product is safe.

The applicant should submit the summary, toxicology data table, scientific literature and references in Module 3.2.P.4.. An example for types of study(ies) recommended is shown below.

Excipient Name	e.g., hydroxypropyl methylcellulose (HPMC)
Drug	euphoripram hydrobromide
Dosage Form	capsule, extended release
Route	oral
Strengths Available	10 mg, 20 mg, 40 mg
Maximum Daily Dose	40 mg

Dosage Strength	Excipient (mg) / Unit Dose	Dosage Units at MDD	Excipient (mg) at MDD
10 mg ER capsule	100 mg	4	400 mg
20 mg ER capsule	100 mg	2	200 mg
40 mg ER capsule	100 mg	1	100 mg

Study (reference)	Chronic toxicity GLP Labs Inc.	Short term toxicity University of Antarctica	etc.
Route of Admin	oral, gavage	IV	
Duration (days)	120 days	30 days	
Species	dog, beagle	rat, SD	
Effect Level	NOAEL 100 mg/kg	LD50 1000 mg/kg	
BSA Conv.	1.8	6.2	
Safety Factor	10	100	
ADI (60kg)	388.9 mg	96.8 mg	