[LONGITUDINAL]

input = {V1, V2, Cl, Q, ka}

PK:

; Transformacion de parametros

V = V1

k = Cl/V1

k12 = Q/V1

k21 = Q/V2

; Definicion del modelo PK

compartment(cmt=1, volume=V, concentration=Cc)

absorption(adm=1, cmt=1, ka)

peripheral(k12, k21)

elimination(cmt=1, k)

EQUATION:

odeType = stiff

OUTPUT:

output = {Cc}

[INDIVIDUAL]

input = {V1\_pop, omega\_V1, Cl\_pop, omega\_Cl,

V2\_pop, omega\_V2, Q\_pop, omega\_Q,

ka\_pop, omega\_ka, w, w\_pop}

EQUATION:

V1\_pred = V1\_pop \* (w / w\_pop)

Cl\_pred = Cl\_pop \* (w / w\_pop)^0.75

DEFINITION:

V1 = {distribution = lognormal, reference = V1\_pred, sd = omega\_V1}

Cl = {distribution = lognormal, reference = Cl\_pred, sd = omega\_Cl}

ka = {distribution = lognormal, reference = ka\_pop, sd = omega\_ka}

V2 = {distribution = lognormal, reference = V2\_pop, sd = omega\_V2}

Q = {distribution = lognormal, reference = Q\_pop, sd = omega\_Q}

;----------------------------------------------

[COVARIATE]

input = {w\_pop, omega\_w}

DEFINITION:

w = {distribution = normal, mean = w\_pop, sd = omega\_w}