

```

In[110]:= Needs["IdentifiabilityAnalysis`"]
          startTime = AbsoluteTime[]

Out[111]:= 3.6878000820094578 × 109

In[112]:= vars = {x1, x2}

Out[112]:= {x1, x2}

In[113]:= params = {k02, k12, k21, v1}

Out[113]:= {k02, k12, k21, v1}

In[114]:= sys = {x1'[t] == k12 * x2[t] - (1 + k21) * x1[t] + u1[t],
                  x2'[t] == k21 * x1[t] - (k02 + k12) * x2[t],
                  x1[0] == 0, x2[0] == 0}

Out[114]:= {x1'[t] == u1[t] - (1 + k21) x1[t] + k12 x2[t],
             x2'[t] == k21 x1[t] - (k02 + k12) x2[t], x1[0] == 0, x2[0] == 0}

In[115]:= output = {x1[t] / v1}

Out[115]:=  $\left\{ \frac{x1[t]}{v1} \right\}$ 

In[116]:= iad = IdentifiabilityAnalysis[{sys, output}, vars, params, t, {u1}]

Out[116]:= IdentifiabilityAnalysisData[True, <>]

In[117]:= iad["IdentifiableQ"]

Out[117]:= True

In[118]:= iad["DegreesOfFreedom"]

Out[118]:= 0

In[119]:= iad["NonIdentifiableParameters"]

Out[119]:= {}

In[120]:= endTime = AbsoluteTime[]
          N[endTime - startTime]

Out[120]:= 3.6878000821939887 × 109

Out[121]:= 0.184531

```