

```
In[1]:= Needs["IdentifiabilityAnalysis`"]
        startTime = AbsoluteTime[]
```

```
Out[2]= 3.6879595833189266 × 109
```

```
In[3]:= vars = {x1, x2, x3}
```

```
Out[3]= {x1, x2, x3}
```

```
In[4]:= params = {k02, k03, k12, k13, k21, k31, v1}
```

```
Out[4]= {k02, k03, k12, k13, k21, k31, v1}
```

```
In[5]:= sys = {x1'[t] == k13 * x3[t] + k12 * x2[t] - (k21 + k31) * x1[t] + u1[t],
               x2'[t] == k21 * x1[t] - (k12 + k02) * x2[t],
               x3'[t] == k31 * x1[t] - (k13 + k03) * x3[t],
               x1[0] == 0, x2[0] == 0, x3[0] == 0}
```

```
Out[5]= {x1'[t] == u1[t] - (k21 + k31) x1[t] + k12 x2[t] + k13 x3[t],
          x2'[t] == k21 x1[t] - (k02 + k12) x2[t],
          x3'[t] == k31 x1[t] - (k03 + k13) x3[t], x1[0] == 0, x2[0] == 0, x3[0] == 0}
```

```
In[6]:= output = {x1[t] / v1}
```

```
Out[6]=  $\left\{ \frac{x1[t]}{v1} \right\}$ 
```

```
In[7]:= iad = IdentifiabilityAnalysis[{sys, output}, vars, params, t, {u1}]
```

```
Out[7]= IdentifiabilityAnalysisData[False, <>]
```

```
In[8]:= iad["IdentifiableQ"]
```

```
Out[8]= False
```

```
In[9]:= iad["DegreesOfFreedom"]
```

```
Out[9]= 1
```

```
In[10]:= iad["NonIdentifiableParameters"]
```

```
Out[10]= {k02, k03, k12, k13, k21, k31}
```

```
In[11]:= endTime = AbsoluteTime[]
          N[endTime - startTime]
```

```
Out[11]= 3.6879595836883030 × 109
```

```
Out[12]= 0.369376
```

```
In[13]:=
```