Annexe II Programme et exécution pour estimer le taux et La pression de gonflement pour l'argile d'Ayaida et la bentonite de Meghnia

```
// Gonflement
clc
clearglobal

texte=x_dialog (["Indice de plasticité Ip(%)"],"");
Ip=evstr (texte)
texte=x_dialog (["limite de liquidité et Wl"],"");
Wl=evstr (texte)
texte=x_dialog (["La teneur en eau Wn"],"");
Wn=evstr (texte)
texte=x_dialog (["Le poids volumique sec gamad (kn/m3)"],"");
gamad=evstr (texte)
texte=x_dialog (["La profondeur prélèvement des échantillons Z(m)"],"");
Z=evstr (texte)
texte=x_dialog (["L activité d argile A"],"");
A=evstr (texte)
texte=x_dialog (["La teneur en argile C(%)"],"");
C=evstr (texte)
texte=x_dialog (["Indice des vide initial e0"],"");
e0=evstr (texte)
close
 //constante

 M=1
  //Seed et al.1

   S1= ((0.1670877*A).*C+0.8221577)

   S2=2.16*10^ (-3)*(Ip) ^ (2.44)

 //Nayak et Christensen

  S3= (0.0229*(Ip)*1.451).*C/Wn+6.38

 //Vijasyvergiya et Ghazzaly

  S4=10^ (0.320102564*gamad+0.0333333333*Wl-0.051282051*Wn-6.692307692)


  S5=10^ (0.03333333*Wl-0.08333333*Wn+0.458333333)

//Johnson et Snethen

  S6=10^ (0.036*Wl-0.0833*Wn+0.458)
```

Annexe II Programme et exécution pour estimer le taux et La pression de gonflement pour l'argile d'Ayaida et la bentonite de Meghnia

```
//Seed et al.2
S7=0.1823723*Ip+0.4559623
// Bekkouche et Aissa Mamoune (2000)
S8=10^ (-0.1*Z+1.06*A+0.22*gamad-0.04*Wn+0.82)
//Komornik et David (1989)
Ps1=10^ (2.08*WL+0.00688*gamad-2.96*Wn+0.132)
//Vijasyvergiya et Ghazzaly
Ps2=10^ (0.32*gamad+0.05416666*Wl-5.128205128)
Ps3=10^ (0.03333333*Wl-0.2241666666*Wn+1.96666667)
// Brackley (1975)
Ps4=10^ ((5.3-147)*(e0/Ip))
// David et Komornik (Bekkouche et al, 2000c)
Ps5=10^ (0.0078182*Wl+0.006432451*gamad-0.00611536*Wn+1.1328183)
//Bekkouche et Aissa Mamoune (2000)
Ps6=10^ (0.01*Ip+1.26*gamad-0.008*Wn-0.1*M-2.179)
Ps7=10^ (-0.001*Wn.*Ip+0.024*WL+0.1*M-0.713)
//end;
//end;
//else disp ("fin de programme");
//END
```

Annexe II **Programme et exécution pour estimer le taux et La pression de gonflement pour l'argile d'Ayaida et la bentonite de Meghnia**

Execution

Argile d'Ayaida

Ip =

22.

23.

21.

18.

11.

WL =

0.45

0.44

0.43

0.42

0.36

Wn =

0.2

0.2

0.2

0.2

0.2

gamad =

24.62

21.35

17.8

16.84

13.25

Z =

6.5

A =

0.6

0.63

0.57

0.49

0.3

C =

36.48

e_0 =

0.595

0.285

0.550

0.689

0.357

M =

1.

S1 =

4.4793733

4.6622341

4.2965125

3.8088838

2.6507655

S2 =

4.0734753

4.5401445

3.6363764

2.4964258

0.7506749

S3 =

139.71692

145.77769

133.65615

115.47384

73.048459

S4 =

15.608495

1.4005296

0.1022339

0.0503458

0.0035546

S5 =

2.8619805

2.8597847

2.8575905

2.8553981

2.8422787

S6 =

2.8677415

2.8653653

2.8629911

2.8606189

2.8464267

S7 =

4.4681529

4.6505252

4.2857806

3.7386637

2.4620576

S8 =

1638324.8

336356.64

48106.083

24333.243

2483.1331

Ps1 =

4.4196268

4.000258

3.6046574

3.3842248

2.398612

Ps2 =

595.07248

53.410692

3.9001969

1.9201929

0.1352991

Ps3 =

86.463604

86.397266

86.33098

86.264743

85.868393

Ps4 =

1

1

1

1

1

```
 Ps5 =

19.655331

18.722682

17.760479

17.506581

16.582109


 Ps6  =


  1.0D+21 *

  91327170.

  7085.9813

  0.2277194

  0.0131160

  0.0000003

 Ps7  =

  0.2474002

  0.2471497

  0.2472407

  0.2474458

  0.2474230
```

Bentonite de Maghnia

Ip =

88.

90.

62.

36.

30.

WL =

1.35

1.34

1.08

0.83

0.8

Wn =

0.2

0.2

0.2

0.2

0.2

gamad =

25.62

23.88

21.47

20.67

18.65

Z =

5.

A =

1.4

1.43

0.98

0.57

0.48

C =

62.73

e_0 =

0.799

0.773

0.698

0.583

0.598

M =

1.

S1 =

15.496134

15.810576

11.093941

6.7965622

5.8532352

S2 =

119.94757

126.70842

51.037509

13.546648

8.6821965

S3 =

923.50991

944.35378

652.53971

381.56951

319.03793

S4 =

34.95132

9.6861634

1.6070817

0.8742237

0.1967956

S5 =

3.0666673

3.0643145

3.0037699

2.9466824

2.9399052

S6 =

3.0898685

3.0873083

3.0214819

2.9595113

2.9521607

S7 =

16.504725

16.869469

11.763045

7.0213651

5.9271313

S8 =

27064499.

12061463.

1186314.9

290803.75

83907.349

Ps1 =

334.39949

310.09474

85.923825

25.621798

21.49374

```
Ps2 =

  1390.9767

  385.45901

  63.196768

  33.97451

  7.6406129

Ps3 =

  92.647421

  92.576338

  90.747221

  89.022544

  88.817798

Ps4 =

  1

  1

  1

  1

  1

Ps5  =

  20.274455

  19.755069

  18.973332

  18.665649
```

18.105687

Ps6 =

1.0D+25 *

759626.31

5107.4015

2.4637691

0.1329230

0.0003299

Ps7 =

0.2522319

0.2518605

0.2514896

0.2510267

0.2513043