Supplementary data for the article:

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South African Journal of Botany

Influence of various concentrations of 24-epibrassinolide on the kinetic parameters during isothermal dehydration of two maize hybrids

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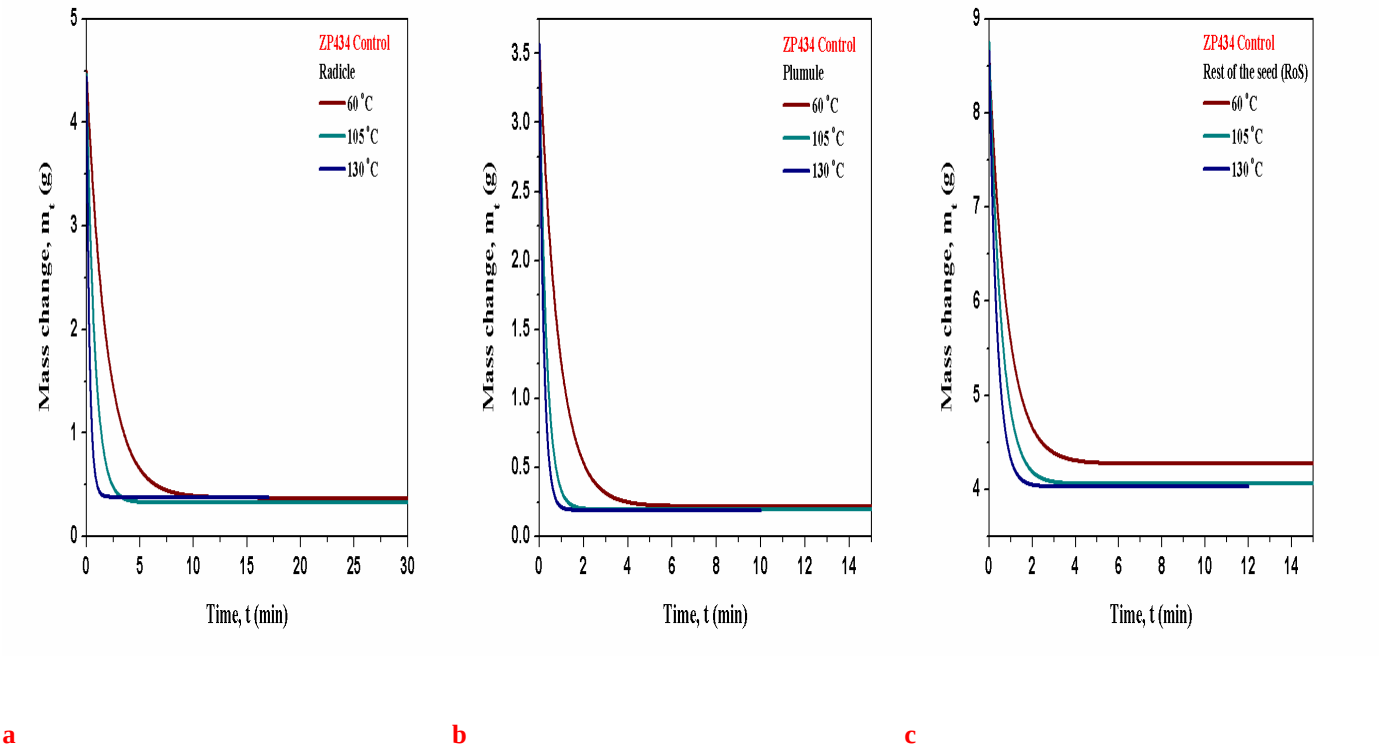
Content of Supplementary Material:

Fig. S.1. Isothermal mass loss experiments (ΔT = 60 – 130 ^{o}C) for dehydration process of the control samples for the ZP434 and ZP704 hybrid maize systems, including all seedling parts: radicle ((a), (d)), plumule ((b), (e)), and RoS ((c), (f)), respectively.

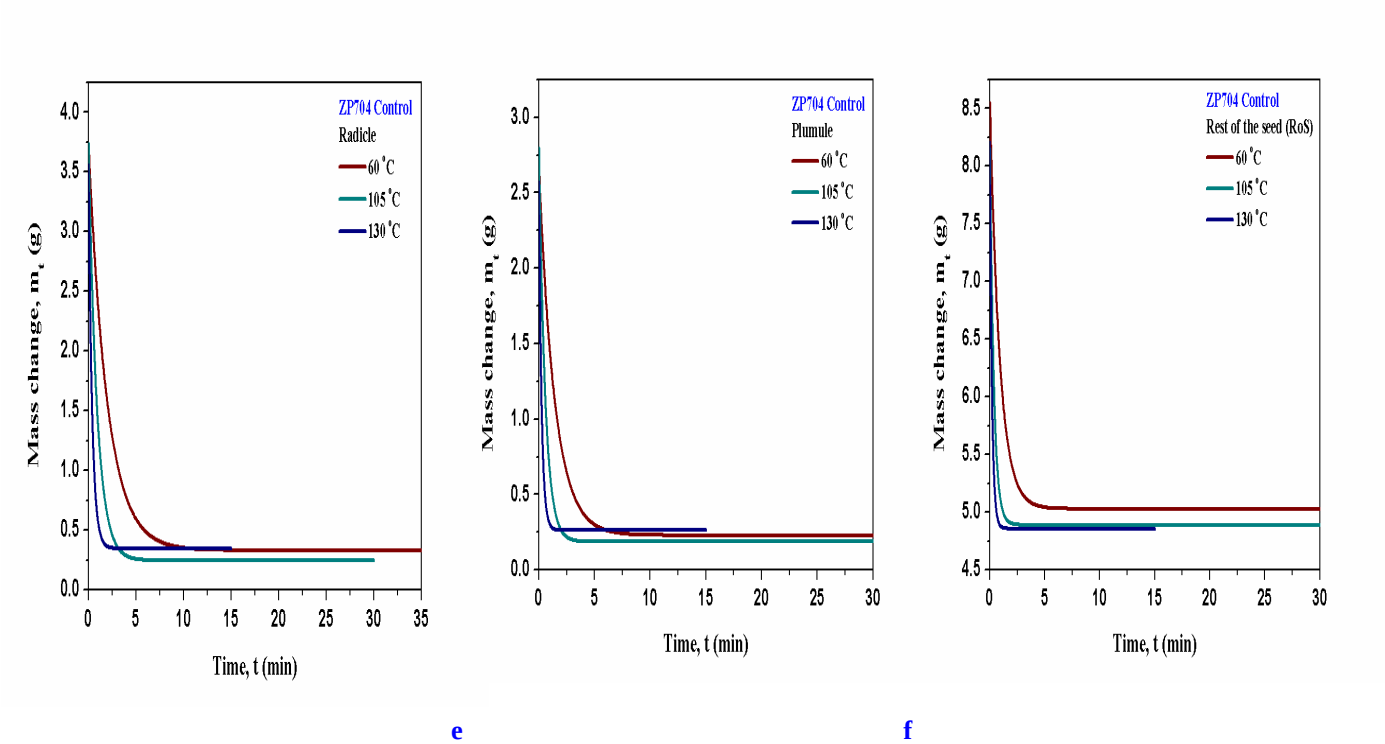
Fig. S.2. Isothermal mass loss experiments (ΔT = 60 – 130 ^{o}C) for dehydration process of ZP434 (red designations) and ZP704 (blue designations) hybrids, including all seedling parts, treated with various concentrations of 24-EBL (5.20×10^{-9} M, 5.20×10^{-12} M, and 5.20×10^{-15} M, respectively).

Fig. S.3. Reduced time plots for selected reaction models, considering dehydration process for control samples of both maize hybrids.

Fig. S.4. Reduced time plots for selected reaction models, including all seedling parts (radicle, plumule and RoS) treated with various concentrations of 24-EBL (5.20×10^{-9} M, 5.20×10^{-12} M and 5.20×10^{-15} M).



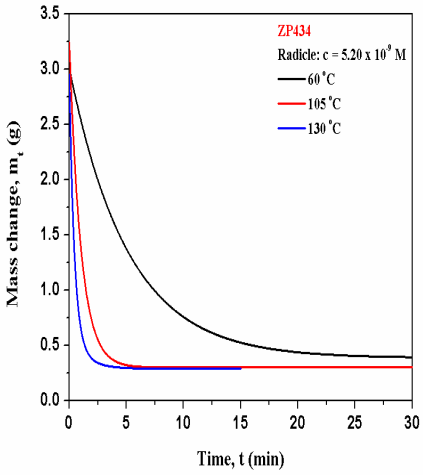
a b c



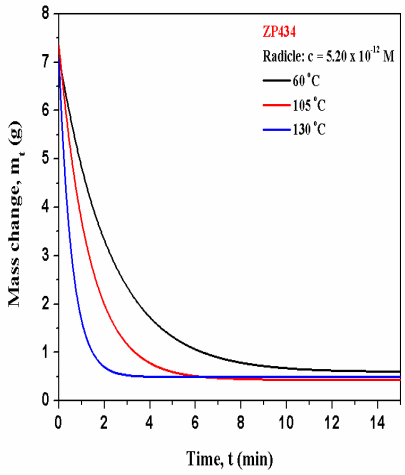
d e f

Fig. S.1.

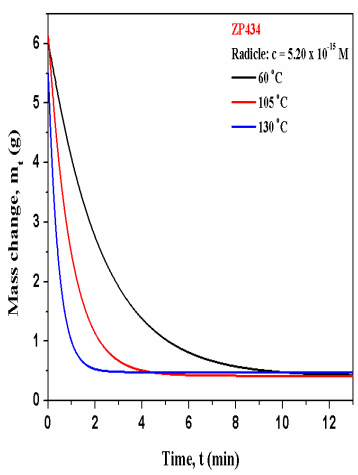
a


ZP434
Radicle: c = 5.20 x 10⁻⁹ M
60 °C
105 °C
130 °C
Mass change, m_t (g)
Time, t (min)

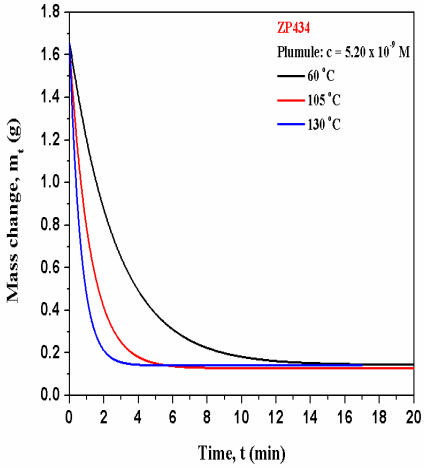
b


ZP434
Radicle: c = 5.20 x 10⁻¹² M
60 °C
105 °C
130 °C
Mass change, m_t (g)
Time, t (min)

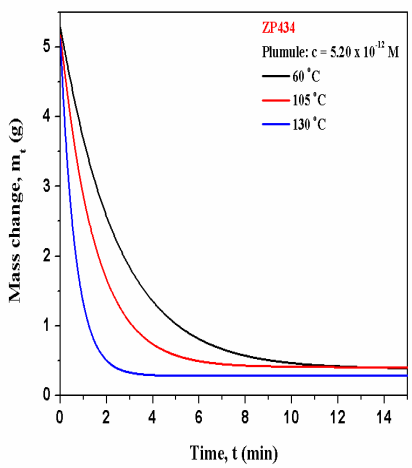
c


ZP434
Radicle: c = 5.20 x 10⁻¹⁵ M
60 °C
105 °C
130 °C
Mass change, m_t (g)
Time, t (min)

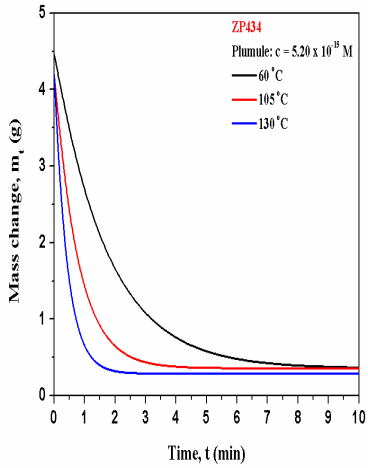
d


ZP434
Plumule: c = 5.20 x 10⁻⁹ M
60 °C
105 °C
130 °C
Mass change, m_t (g)
Time, t (min)

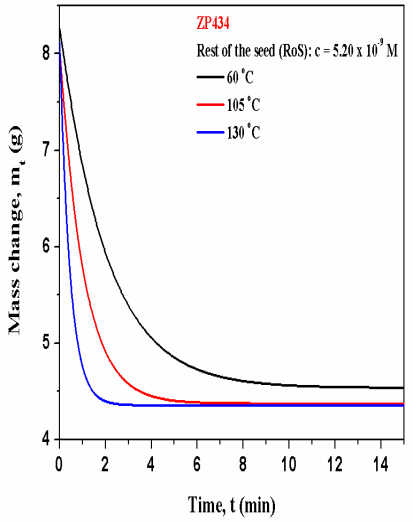
e


ZP434
Plumule: c = 5.20 x 10⁻¹² M
60 °C
105 °C
130 °C
Mass change, m_t (g)
Time, t (min)

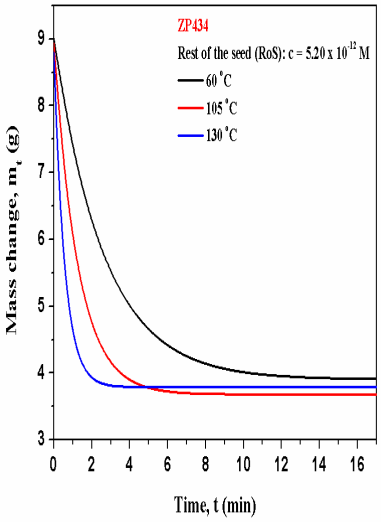
f


ZP434
Plumule: c = 5.20 x 10⁻¹⁵ M
60 °C
105 °C
130 °C
Mass change, m_t (g)
Time, t (min)

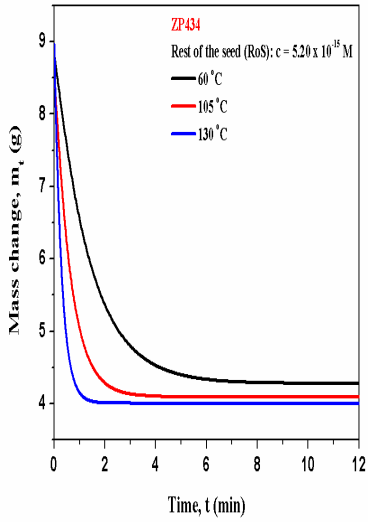
g


ZP434
Rest of the seed (RoS): c = 5.20 x 10⁻⁹ M
60 °C
105 °C
130 °C
Mass change, m_t (g)
Time, t (min)

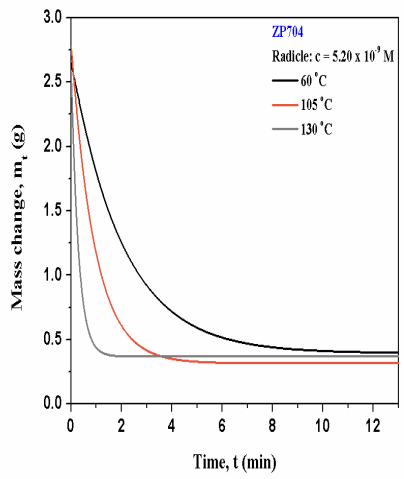
h


ZP434
Rest of the seed (RoS): c = 5.20 x 10⁻¹² M
60 °C
105 °C
130 °C
Mass change, m_t (g)
Time, t (min)

i


ZP434
Rest of the seed (RoS): c = 5.20 x 10⁻¹⁵ M
60 °C
105 °C
130 °C
Mass change, m_t (g)
Time, t (min)

j



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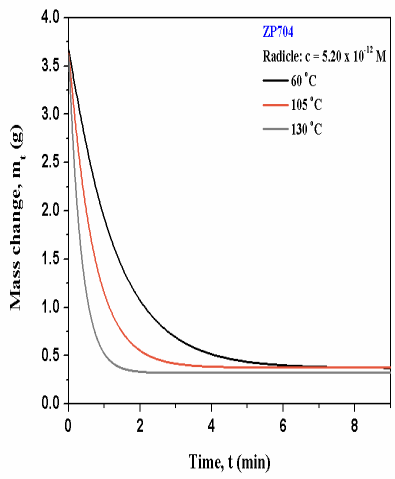

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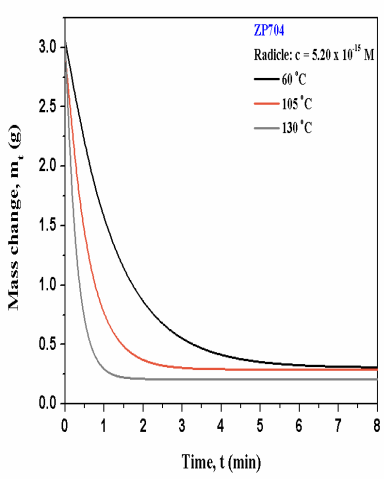
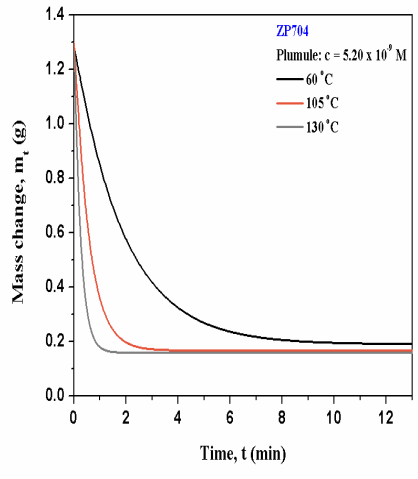


m



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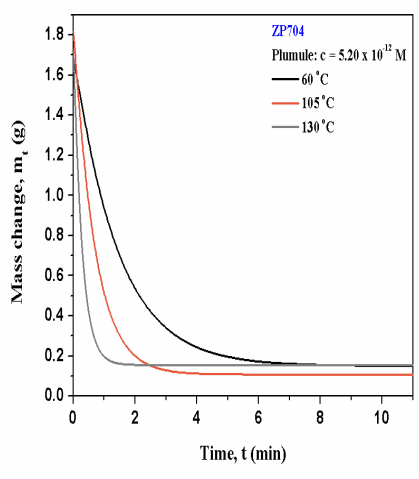
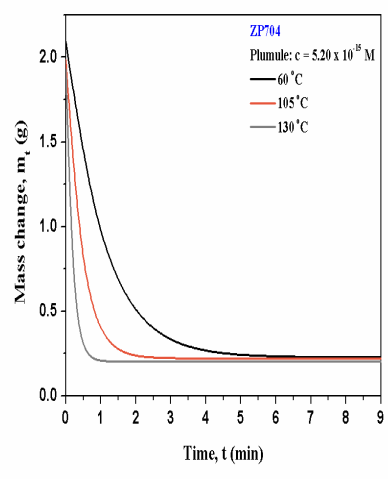
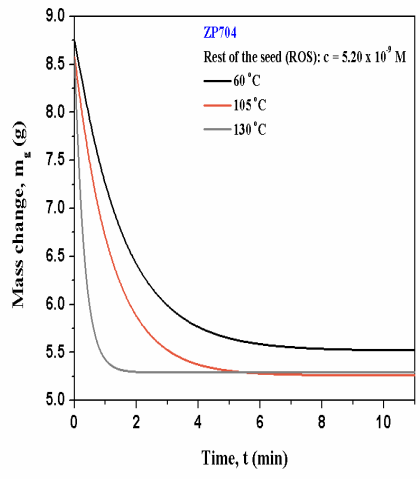


o



p



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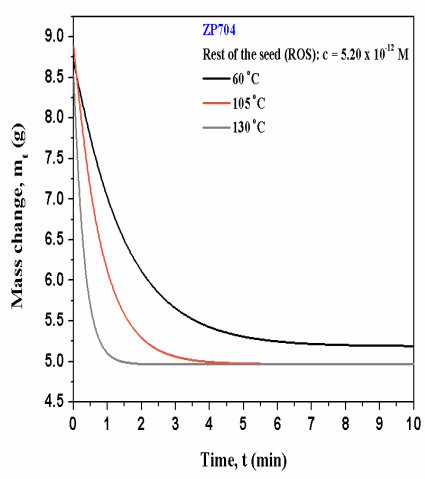

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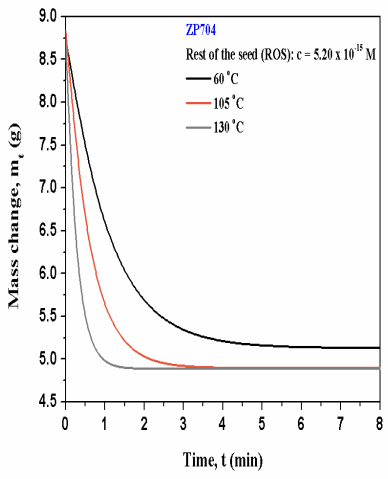


Fig. S.2.

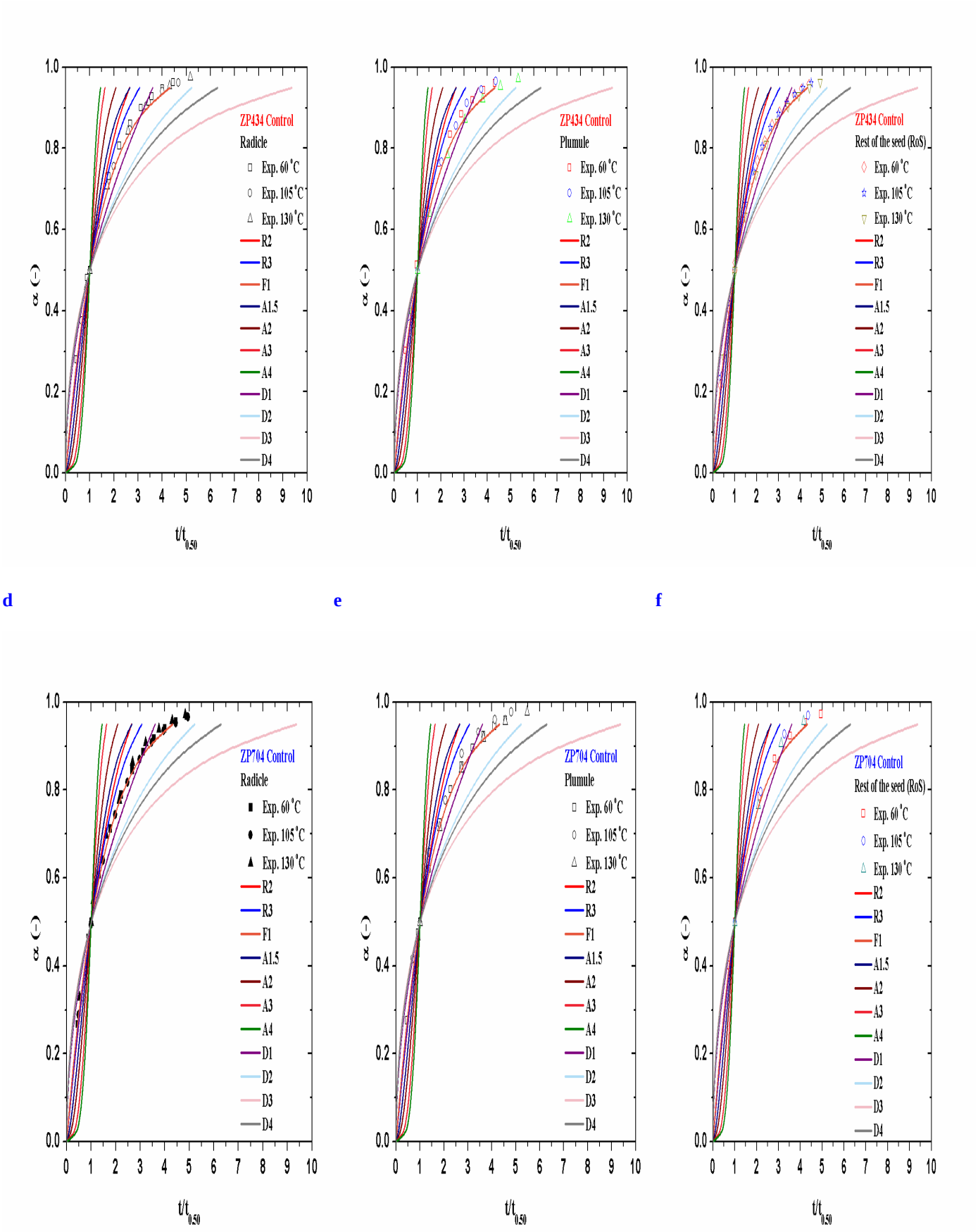
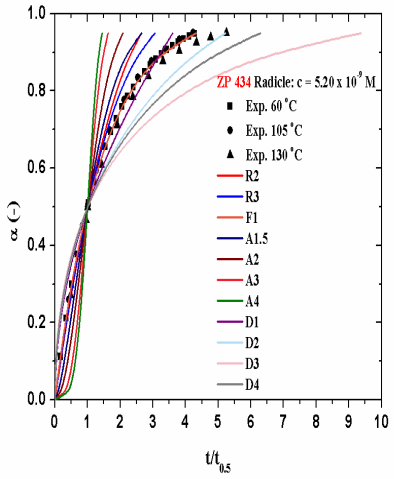
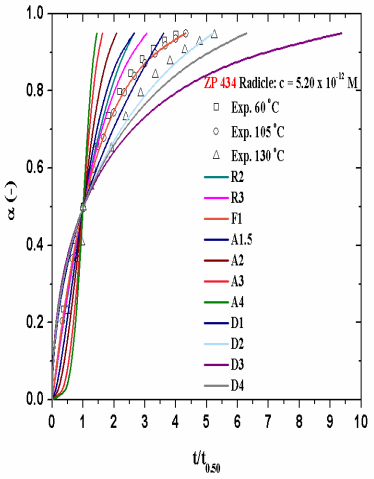

a
b
c
d
e
f
ZP434 Control
Radicle
Plumule
Rest of the seed (RoS)
ZP704 Control
Exp. 60 °C
Exp. 105 °C
Exp. 130 °C
R2
R3
F1
A1.5
A2
A3
A4
D1
D2
D3
D4
α (-)
t/t0.50

Fig. S.3.

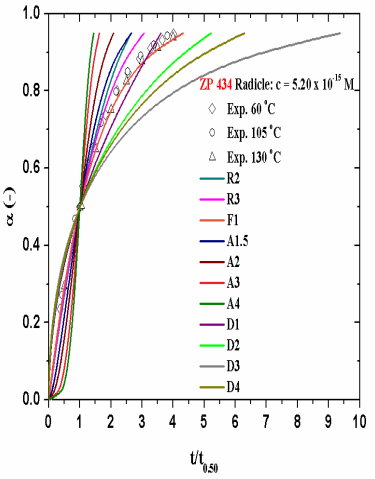
a


ZP 434 Radicle: c = 5.20 x 10⁻⁹ M
Exp. 60 °C
Exp. 105 °C
Exp. 130 °C
R2
R3
F1
A1.5
A2
A3
A4
D1
D2
D3
D4
α (-)
t/t0.5

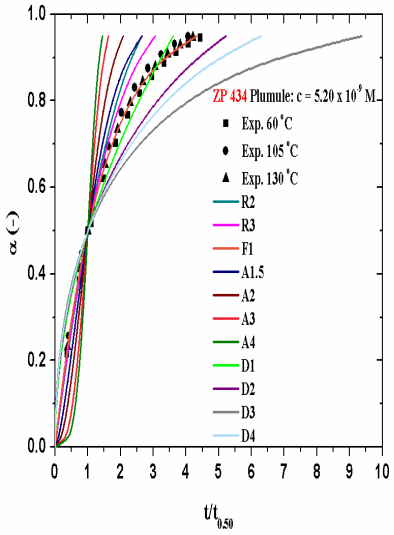
b


ZP 434 Radicle: c = 5.20 x 10⁻¹² M
Exp. 60 °C
Exp. 105 °C
Exp. 130 °C
R2
R3
F1
A1.5
A2
A3
A4
D1
D2
D3
D4
α (-)
t/t0.50

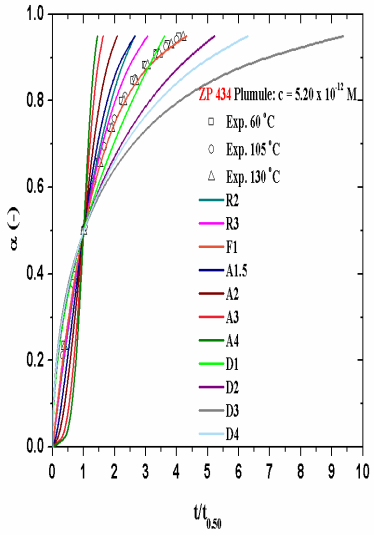
c


ZP 434 Radicle: c = 5.20 x 10⁻¹⁵ M
Exp. 60 °C
Exp. 105 °C
Exp. 130 °C
R2
R3
F1
A1.5
A2
A3
A4
D1
D2
D3
D4
α (-)
t/t0.50

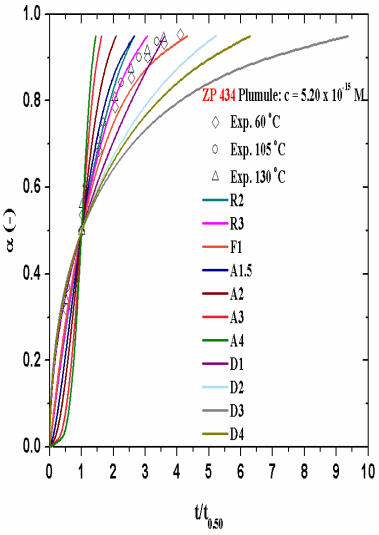
d


ZP 434 Plumule: c = 5.20 x 10⁻⁹ M
Exp. 60 °C
Exp. 105 °C
Exp. 130 °C
R2
R3
F1
A1.5
A2
A3
A4
D1
D2
D3
D4
α (-)
t/t0.50

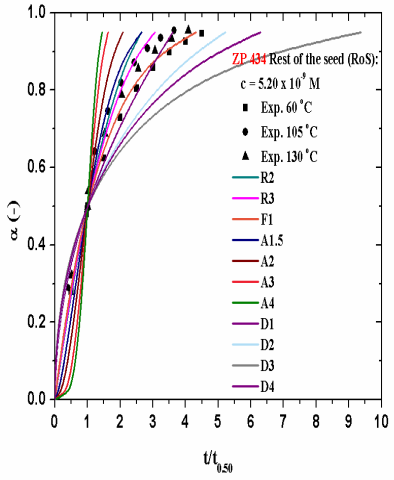
e


ZP 434 Plumule: c = 5.20 x 10⁻¹² M
Exp. 60 °C
Exp. 105 °C
Exp. 130 °C
R2
R3
F1
A1.5
A2
A3
A4
D1
D2
D3
D4
α (-)
t/t0.50

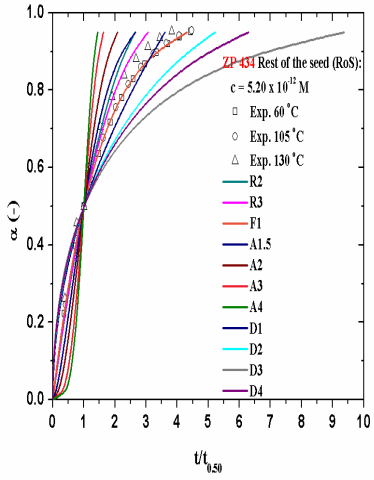
f


ZP 434 Plumule: c = 5.20 x 10⁻¹⁵ M
Exp. 60 °C
Exp. 105 °C
Exp. 130 °C
R2
R3
F1
A1.5
A2
A3
A4
D1
D2
D3
D4
α (-)
t/t0.50

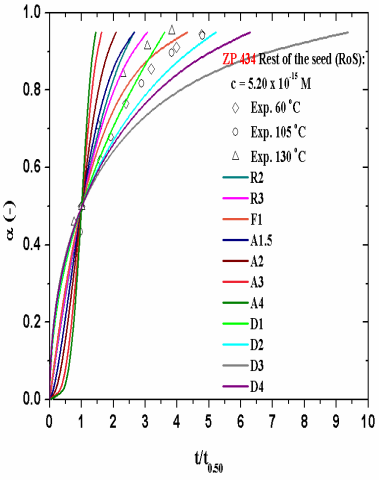
g


ZP 434 Rest of the seed (RoS):
c = 5.20 x 10⁻⁹ M
Exp. 60 °C
Exp. 105 °C
Exp. 130 °C
R2
R3
F1
A1.5
A2
A3
A4
D1
D2
D3
D4
α (-)
t/t0.50

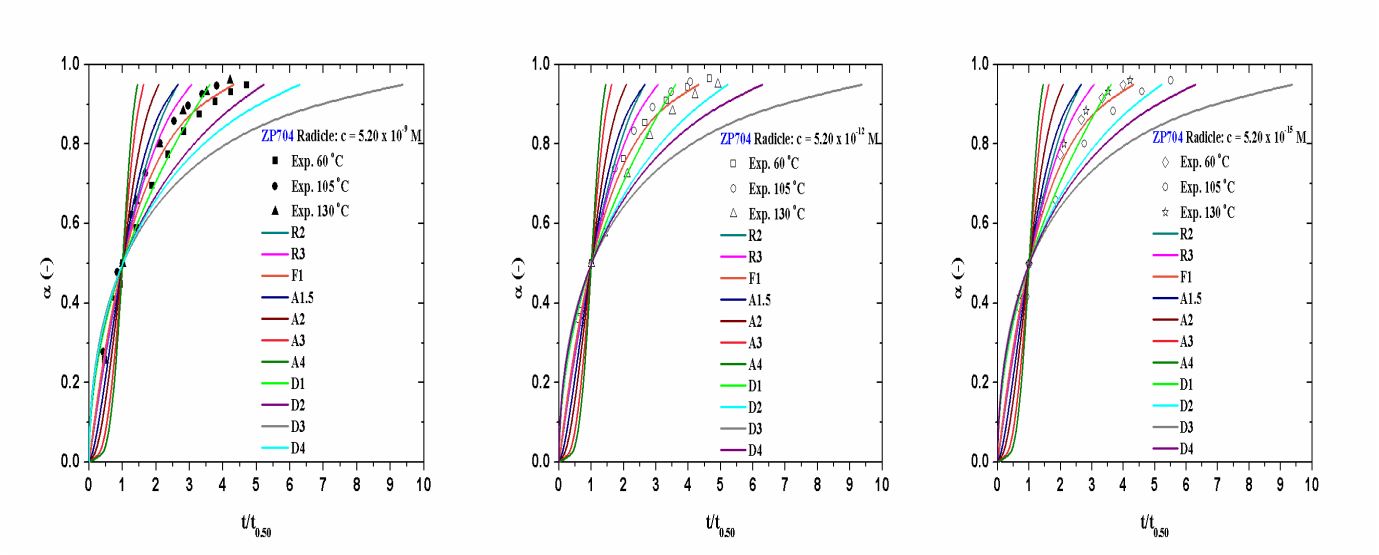
h


ZP 434 Rest of the seed (RoS):
c = 5.20 x 10⁻¹² M
Exp. 60 °C
Exp. 105 °C
Exp. 130 °C
R2
R3
F1
A1.5
A2
A3
A4
D1
D2
D3
D4
α (-)
t/t0.50

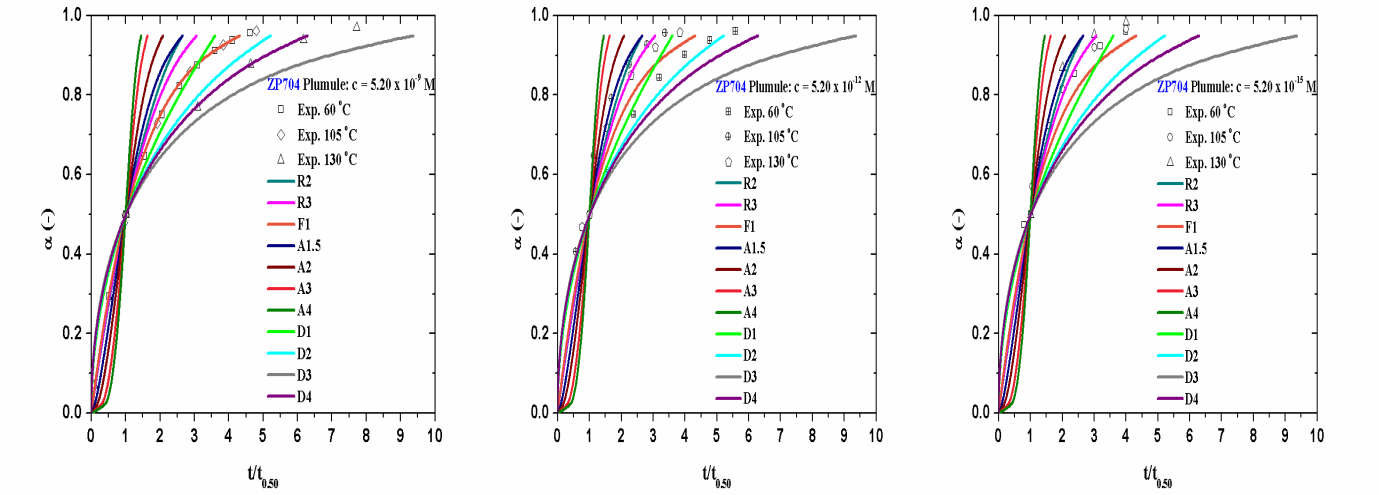
i


ZP 434 Rest of the seed (RoS):
c = 5.20 x 10⁻¹⁵ M
Exp. 60 °C
Exp. 105 °C
Exp. 130 °C
R2
R3
F1
A1.5
A2
A3
A4
D1
D2
D3
D4
α (-)
t/t0.50

j **k** **l**



m **n** **o**



p **q** **r**

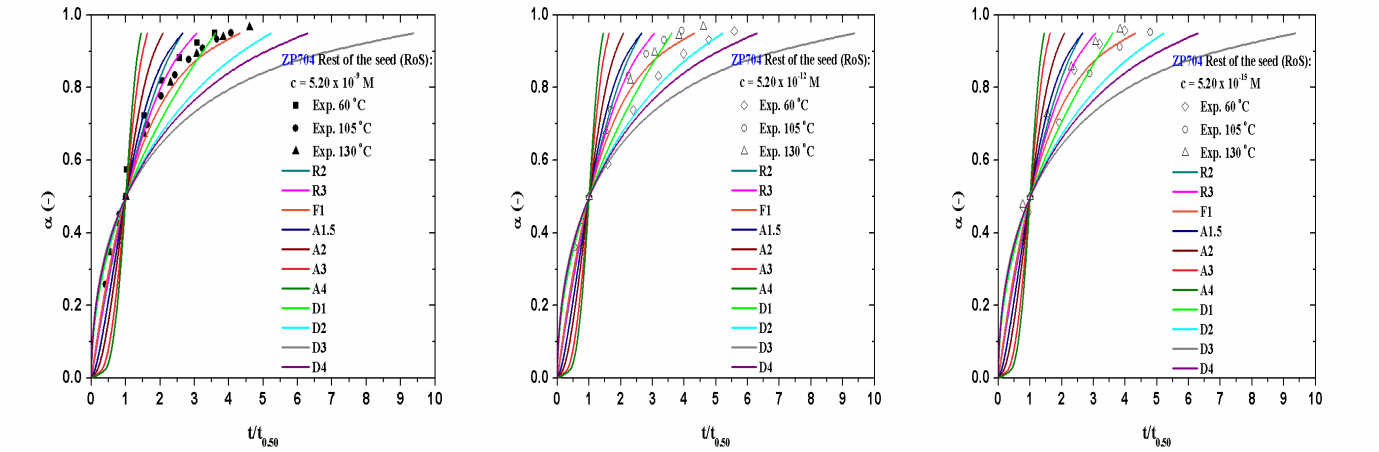


Fig. S.4.