Natural Black Colour

PRESENTED BY: Arjuna Natural Ltd

Arjuna Natural Extracts Ltd,
PB No. 126, Bank Road,
Alwaye, Kerala 683101,
India

Tel : 0484 - 4080400, 2622644,
Fax: (91) 0484 2622612
Email : mail@arjunanatural.com,
Website : www.arjunanatural.com

Aim:

- To do comparative study of different Natural Black colors towards Heat Stability and UV absorption.

1. Materials

a. Natural Black Color- ABS 101(based on sesame seed extract) from Arjuna Natural Ltd.

b. Natural Black Color- ABS 102(high intense black color based on sesame seed extract) from Arjuna Natural Ltd.

c. Titanium Dioxide-TiO_2

2. Methods

Different concentration of Natural Black color was prepared in water for comparing the opacity, UV absorption by UV Visible Spectro Photometer and Heat stability in water done at 100^0 C for 15minuts, results evaluated by Xrite Spectrophotometer.

a. Natural Black Colour –ABS 101 at 1000ppm and Natural Black Colour-ABS 102 at 1000ppm.

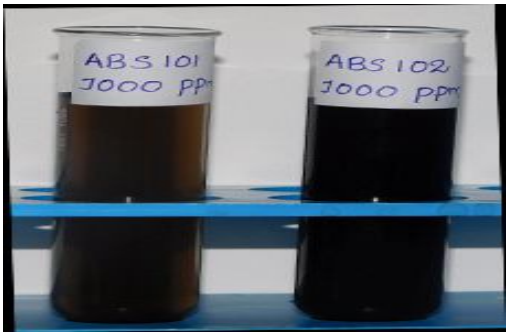
b. Natural Black Colour –ABS 101 at 1000ppm and Natural Black Colour-ABS 102 at 100ppm.

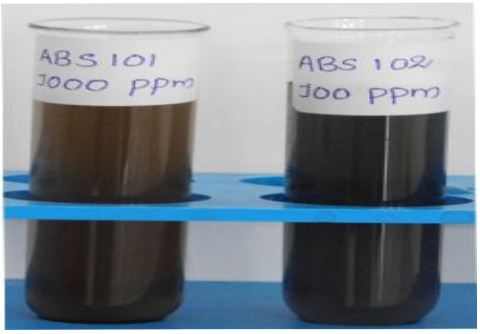
c. Natural Black Colour –ABS 102 at 100ppm and Natural Black Colour-ABS 102 at 1000ppm.

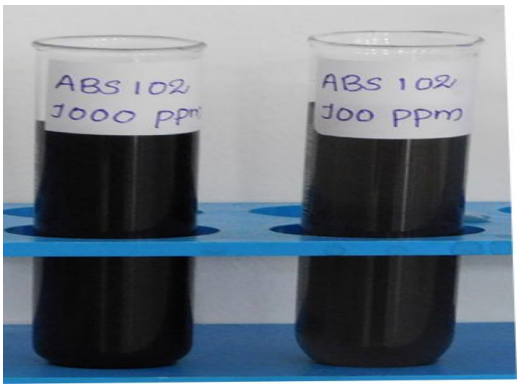
d. Natural Black Colour –ABS 102 at 100ppm and Natural Black Colour-ABS 102 at 100ppm +100ppm TiO_2.

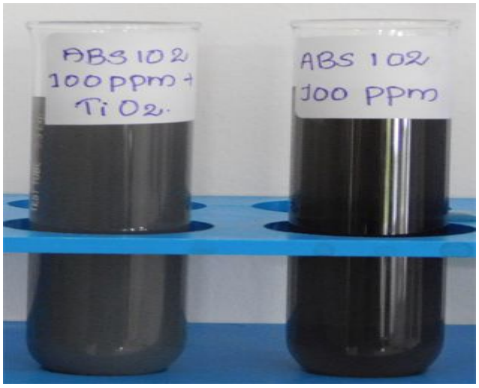
3. Observation

a. Images of Natural Black Colour in water









b. Opacity of Natural Colour

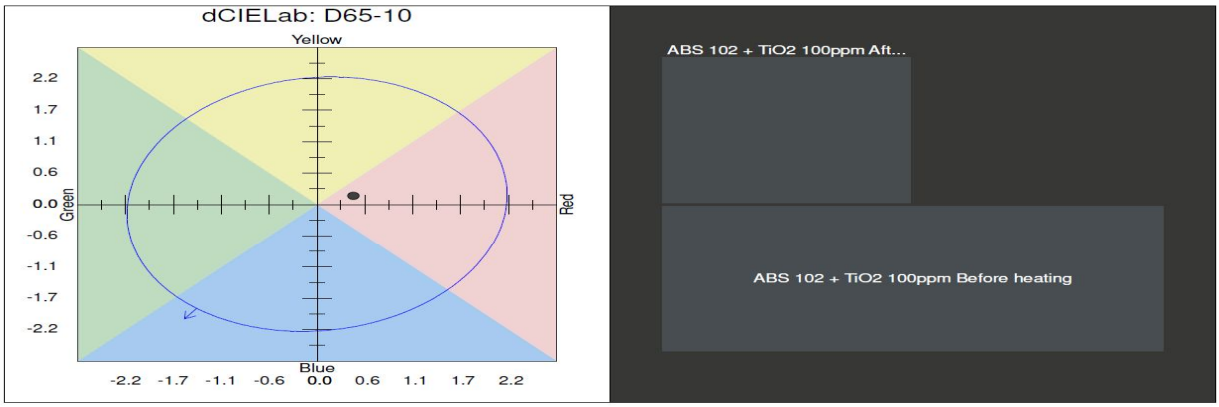
Si No	Sample Details	Opacity
1	Natural Black Colour -ABS 101 @1000ppm in water	Translucent
2	Natural Black Colour -ABS 102 @1000ppm in water	Opaque
3	Natural Black Colour -ABS 102 @100ppm in water	Translucent
4	Natural Black Colour -ABS 102 @100ppm+ TiO2 100ppm in water	Opaque

c. Heat Stability studies at 100^{0}C for 15 minutes

7/3/2019 2:44:14 PM

Arjuna Natural Extracts

Black color ABS 102 100ppm + TiO2 100ppm heat stability. [database=iControl9.mdb]



ILL 1 D65-10

P/F Limit 2.00
Margin 0.00
I:c 1.0 1.0 1.0

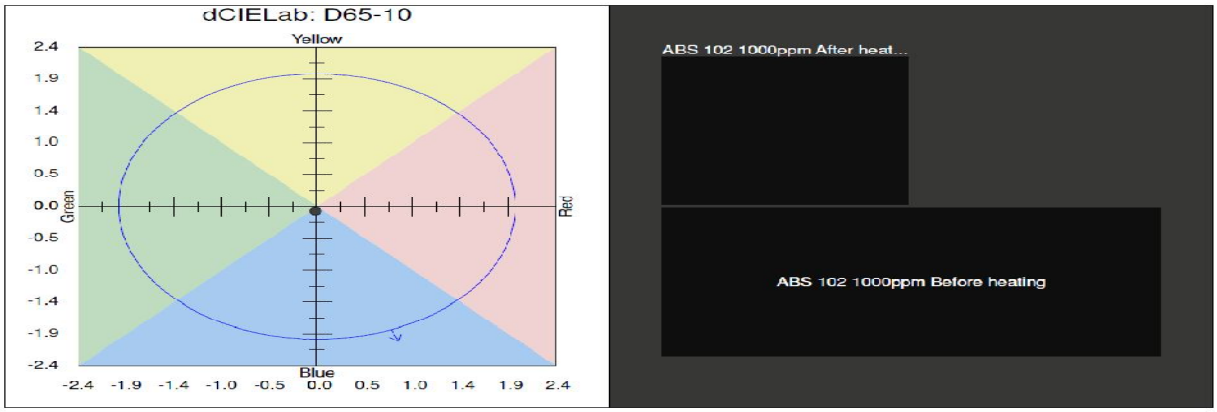
Standard Name:	L*	a*	b*
ABS 102 + TiO2 100ppm Before heating	30.85	-1.88	-2.49

Trial Name	DE2000	DL00	DC00	DH00	P/F DE2000	L*	a*
ABS 102 + TiO2 100ppm After he	0.69	-0.37 D	-0.49 D	0.31 B	Passed	30.37	-1.46

7/3/2019 2:38:36 PM

Arjuna Natural Extracts

Black color ABS 102 1000ppm heat stability [database=iControl9.mdb]



ILL 1 D65-10

P/F Limit 2.00
Margin 0.00
I:c 1.0 1.0 1.0

Standard Name:	L*	a*	b*
ABS 102 1000ppm Before heating	1.23	0.03	-0.08

Trial Name	DE2000	DL00	DC00	DH00	P/F DE2000	L*	a*
ABS 102 1000ppm After heating	0.24	0.23 L	0.06 B	-0.04 G	Passed	1.63	0.02

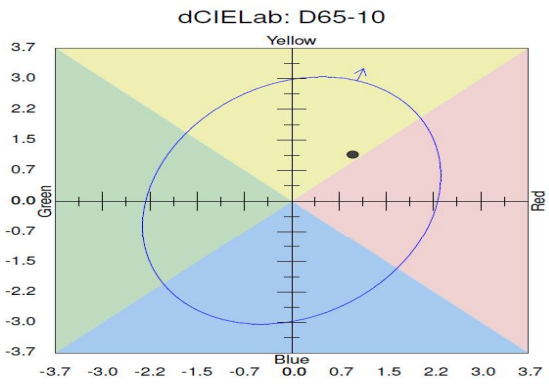
Arjuna Natural Extracts Ltd,
PB No. 126, Bank Road,
Alwaye, Kerala 683101,
India

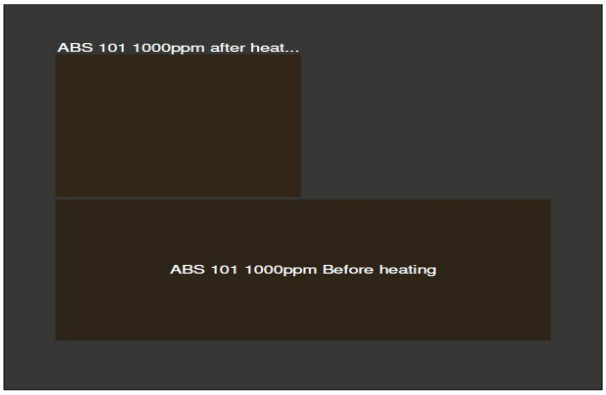
Tel : 0484 - 4080400, 2622644,
Fax: (91) 0484 2622612
Email : mail@arjunanatural.com,
Website : www.arjunanatural.com

7/3/2019 2:39:52 PM

Arjuna Natural Extracts

Black color ABS 101 1000ppm heat stability [database=iControl9.mdb]





ILL 1 D65-10

P/F Limit 2.00
Margin 0.00
l:c 1.0 1.0 1.0

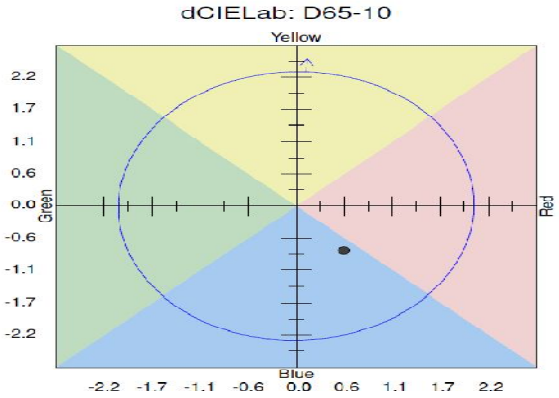
Standard Name:	L*	a*	b*
ABS 101 1000ppm Before heating	11.26	3.73	10.59

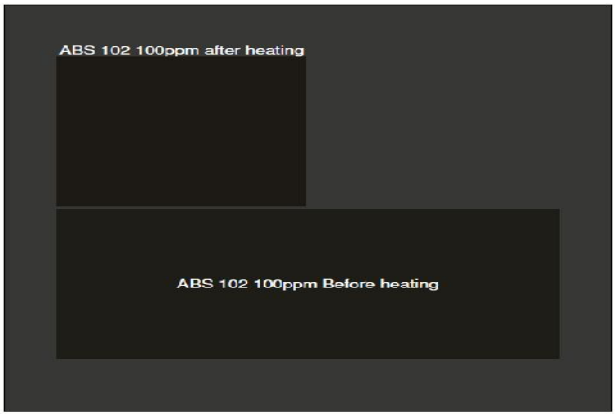
Trial Name	DE2000	DL00	DC00	DH00	P/F DE2000	L*	a*
ABS 101 1000ppm after heating	1.39	0.68 L	1.05 B	-0.61 R	Passed	12.32	4.68

7/3/2019 2:42:57 PM

Arjuna Natural Extracts

Black color ABS 102 100ppm heat stability [database=iControl9.mdb]





ILL 1 D65-10

P/F Limit 2.00
Margin 0.00
l:c 1.0 1.0 1.0

Standard Name:	L*	a*	b*
ABS 102 100ppm Before heating	6.33	0.18	3.59

Trial Name	DE2000	DL00	DC00	DH00	P/F DE2000	L*	a*
ABS 102 100ppm after heating	1.20	-0.52 D	-0.50 D	-0.95 R	Passed	5.46	0.73

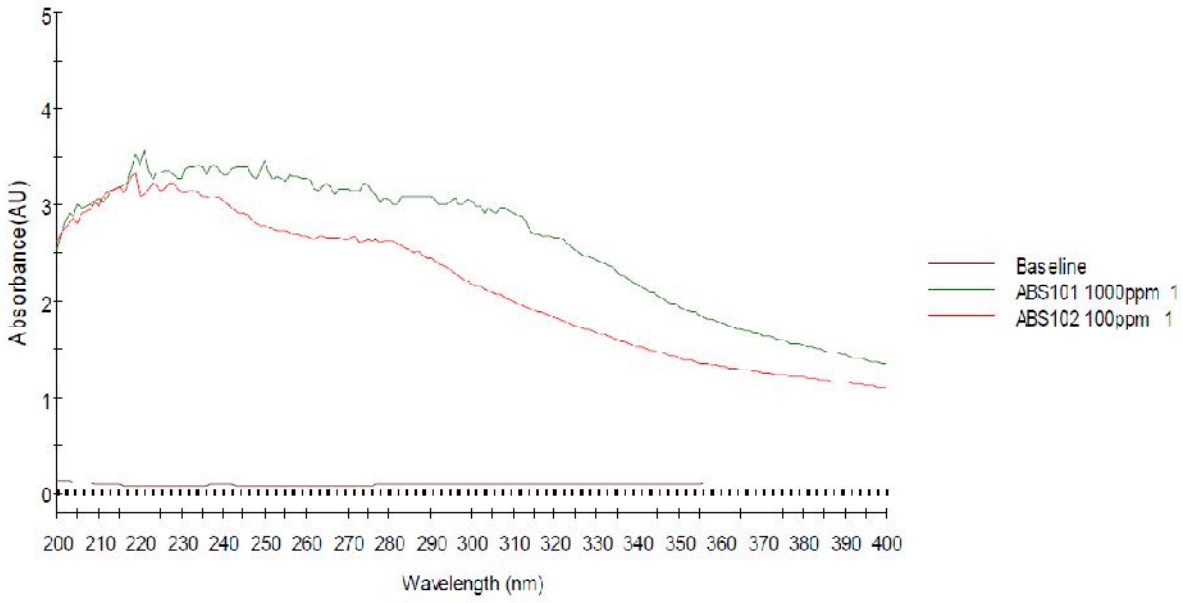
From the above graphs we can understand that Natural Black colour ABS 101 and ABS 102 have good heat stability.

Arjuna Natural Extracts Ltd,
PB No. 126, Bank Road,
Alwaye, Kerala 683101,
India

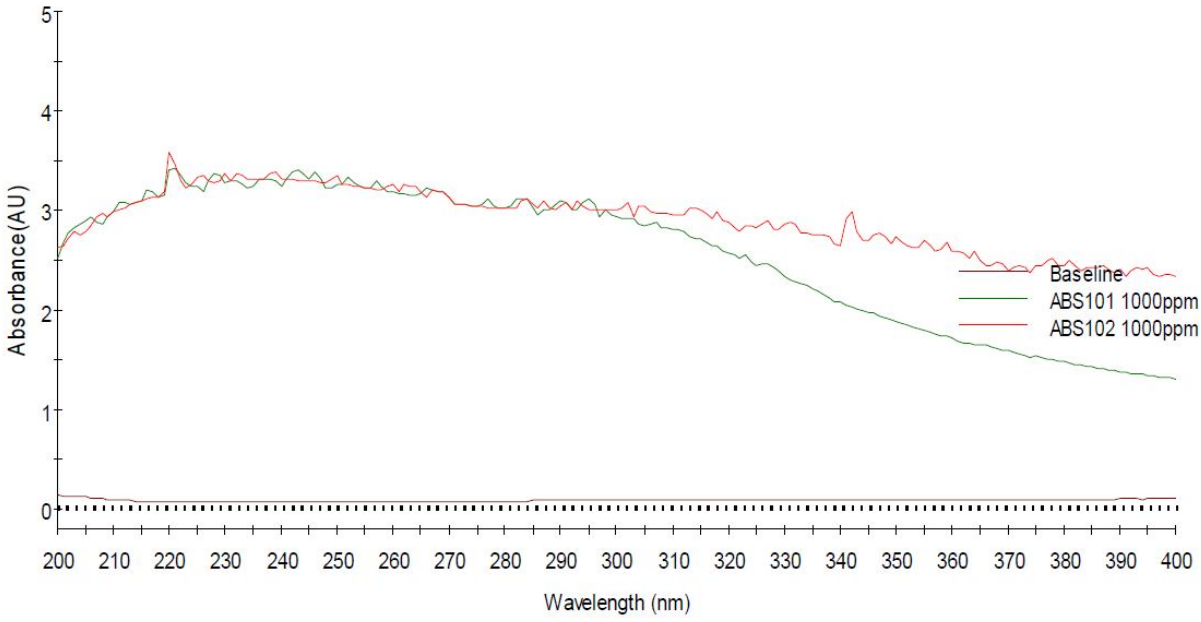
Tel : 0484 - 4080400, 2622644,
Fax: (91) 0484 2622612
Email : mail@arjunanatural.com,
Website : www.arjunanatural.com

c. UV absorption studies.

1. UV absorption comparison between ABS 1000ppm and ABS 102 100ppm



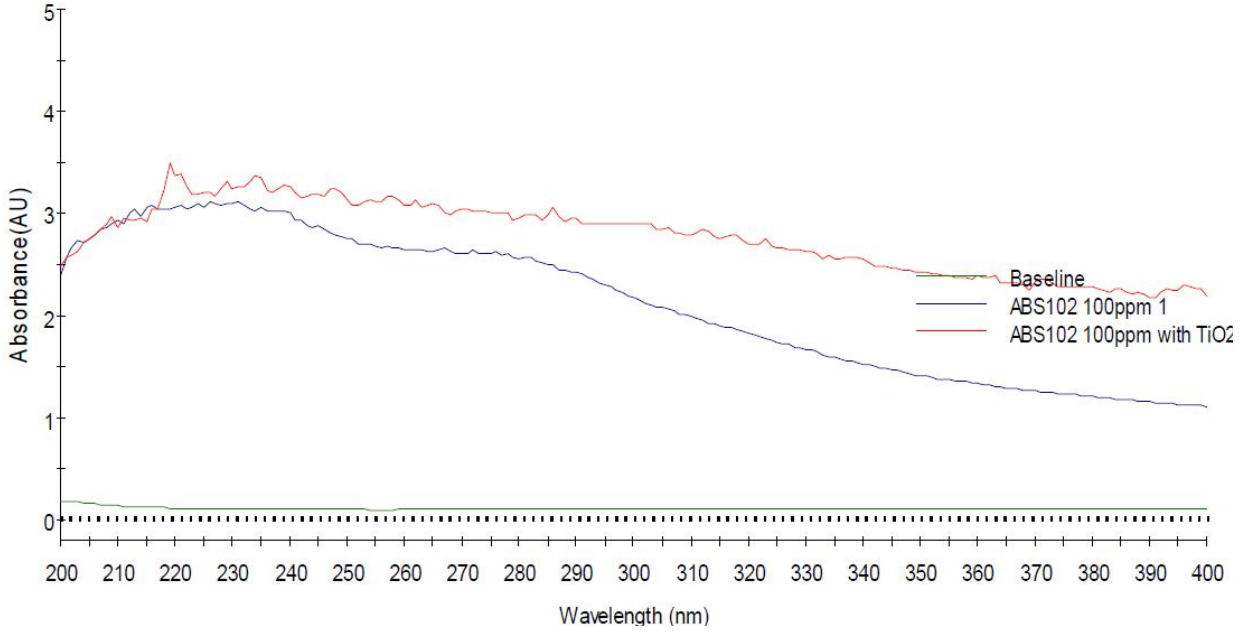
2. UV absorption comparison between ABS 1000ppm and ABS 102 1000ppm



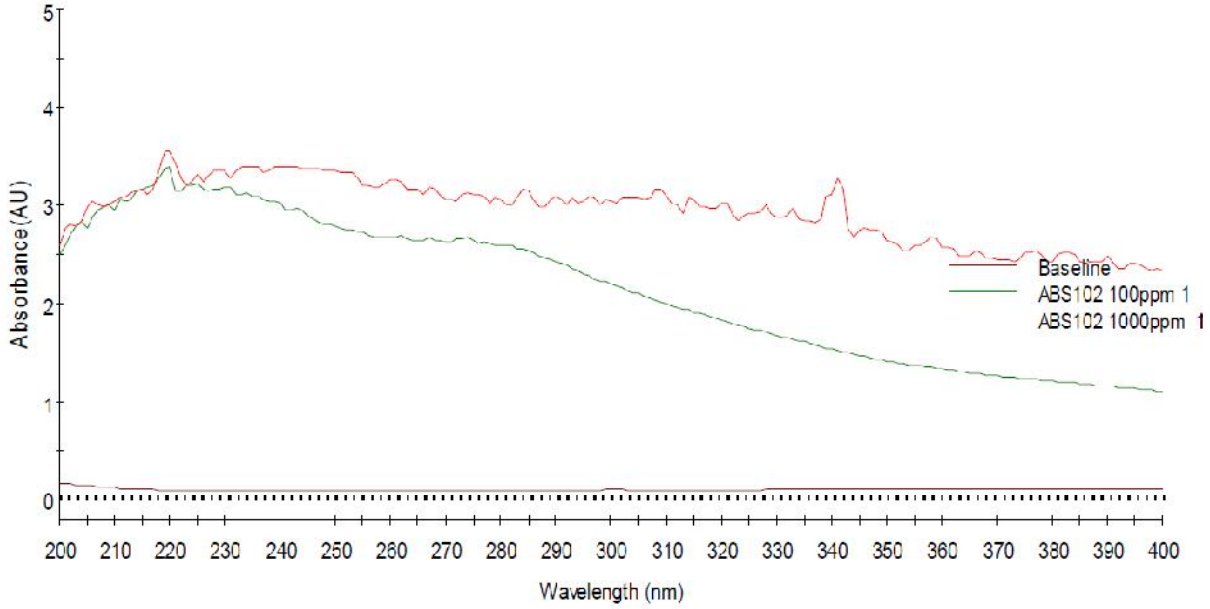
Arjuna Natural Extracts Ltd,
PB No. 126, Bank Road,
Alwaye, Kerala 683101,
India

Tel : 0484 - 4080400, 2622644,
Fax: (91) 0484 2622612
Email : mail@arjunanatural.com,
Website : www.arjunanatural.com

3. UV absorption comparison between ABS 102 100ppm and ABS 102 100ppm with TiO_2



4. UV absorption comparison between ABS 1000ppm and ABS 102 100ppm



From the above UV absorption spectra, we can understand that UV absorption increases with increase in dosage at water.

3. Conclusion

Natural Black colours ABS 101 and ABS 102 have good heat stability and good UV absorption capacity.

Arjuna Natural Extracts Ltd,
PB No. 126, Bank Road,
Alwaye, Kerala 683101,
India

Tel : 0484 - 4080400, 2622644,
Fax: (91) 0484 2622612
Email : mail@arjunanatural.com,
Website : www.arjunanatural.com