

Table 1. Contents of major phenolic acids in sorghum (adapted from Awika and Rooney, 2004)

Phenolic acid	$\mu\text{g/g}$ (dry wt) <sup>a</sup>	Reference
<i>Sorghum Grain</i>		
Ferulic ( <b>8</b> )	100-500	Hahn and Rooney (1986); Hahn (1984)
Sinapic ( <b>11</b> )	50-140	Hahn et al. (1983)
<i>p</i> -Cuomeric ( <b>10</b> )	70-230	Hahn et al. (1983)
<i>Sorghum Bran</i>		
Ferulic ( <b>8</b> )	1400-2170	Hahn (1984)
Sinapic ( <b>11</b> )	100-630	Hahn (1984)
<i>p</i> -Cuomeric ( <b>10</b> )	0-970	Hahn (1984)

<sup>a</sup> Total (free and bound) measured by HPLC

Table 2. Anthocyanin content of sorghum brans (adapted from Awika and Rooney, 2004)

Commodity	Content <sup>a</sup>	Major anthocyanidins	Source
Black sorghum bran	4.0-9.8	Apigeninidin and luteolinidin	b
Brown sorghum bran	1.6-3.9	Apigeninidin and luteolinidin	b
Red sorghum bran	3.3	Apigeninidin	b

(b) Awika (2003)

<sup>a</sup>mg/g, fresh weight

Table 3. Total phenol content (expressed as mg tannic acid equivalent/g) and condensed tannin content (expressed as mg catechin equivalent/g) of sorghum bran fractions on a dry matter basis

Sample	Total phenols ( $\pm$ SD)	Condensed tannins ( $\pm$ SD)
White sorghum bran fractions	6.81 <sup>a</sup> (0.58)	8.52 <sup>a</sup> (0.65)
Red sorghum bran fractions	33.18 <sup>b</sup> (3.17)	117.98 <sup>b</sup> (4.27)

Values in the same column with different superscripts are significantly different  $p \leq 0.05$

SD Standard deviation

Table 4. Statistical analysis of the effect of CPE from bran fractions of condensed tannin and condensed tannin-free sorghum at concentrations of 1, 2, 4 and 20 % on the inhibition (mm) of *B. cereus* ATCC 1178, *E. coli* ATCC 25922 and *L. monocytogenes* ATCC 7644 bacteria

Factors	Degrees. of Freedom	P
Bacteria ( <i>B. cereus</i> ATCC 1178 & <i>L. monocytogenes</i> ATCC 7644)	1	<0.01
Sorghum (condensed tannin & condensed tannin-free)	1	<0.01
Concentration (1, 2, 4 & 20 %)	3	<0.01
Bacteria*Sorghum	1	<0.01
Bacteria*Concentration	3	<0.01
Sorghum*Concentration	3	<0.01
Bacteria*Sorghum*Concentration.	3	0.01

Table 5. Inhibition (mm) of *B. cereus* ATCC 1178, *E. coli* ATCC 25922 and *L. monocytogenes* ATCC 7644 by CPE from bran fractions of condensed tannin and condensed tannin-free sorghum varieties (n=9)

Bacteria	Sorghum CPE	Concentration (%)	Inhibition (mm) ( $\pm$ SD)
<i>B. cereus</i> ATCC 1178	Condensed tannin	1	1.5 (0.2)
		2	3.1 (0.2)
		4	4.4 (0.2)
		20	6.6 (0.2)
	Condensed tannin-free	1	0
		2	0
		4	0
		20	1.7 (0.2)
<i>L. monocytogenes</i> ATCC 7644	Condensed tannin	1	0.5 (0.2)
		2	1.0 (0.2)
		4	1.4 (0.2)
		20	3.6 (0.2)
	Condensed tannin-free	1	0
		2	0
		4	0
		20	1.0 (0.2)
<i>E. coli</i> ATCC 25922	Condensed tannin	1, 2, 4 & 20	No inhibition
	Condensed tannin-free	1, 2, 4 & 20	No inhibition

SD Standard deviation