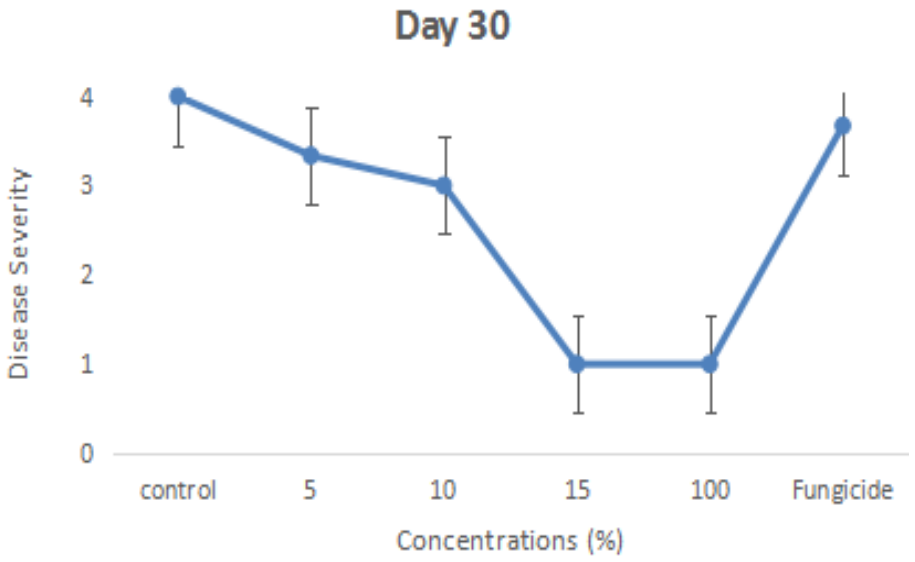

Figure 6 Effect of different concentrations of *Tridax procumbens* on disease severity in orange fruits pre-inoculated with *Lasiodiplodia* sp and stored for 30 days

2.1 Phytochemical compositions of the aqueous extract of *Tridax procumbens*

Tannins, alkaloids, cardiac glycosides, saponins and flavonoids were all detected in the *Tridax* extracts (Table 1).

Table 1 Phytochemical constituents in *Tridax procumbens*

Phytochemicals	Aqueous extract
Tannins	+
Alkaloids	+
Cardiac glycosides	+
Saponins	+
Flavonoids	+

2.2 Bioactive compounds detected in aqueous *Tridax procumbens* extracts

Table 2 shows the bioactive compounds with their peak area (%) detected in *Tridax* extract included 2,3-Butanediol (10.05), Hexanoic acid (11.77), Benzaldehyde,4-ethyl-(12.92), 4H-Pyran-4-one, 2,3 dihdro-3,5-dihydroxyl-6-methy-(6.89), Ethanone,1-(2-hydroxy-5-methylphenyl) (2.58), Methyl 4-(hydroxymethyl) benzoate (8.04), p-Menth-3-en-9-ol (3.73), Eugenol (1.44), Acetamide, N-tetrahydrofurfuryl-2-methoxy-(4.30), n-Hexadecanoic acid (12.64), 9,12-Octadecadienoic acid methy ester (1.03), Oleic acid (10.33), Octadecanoic acid (6.32) while the chromatograph of the aqueous extract of *Tridax procumbens* using GC-MS is shown in Figure 7.

Table 2 Bioactive compounds detected in aqueous *Tridax procumbens*

S/N	Retention Time (min)	Compound detected	Chemical symbol	Peak area (%)
1	8.00	2,3-Butanediol	$C_4H_{10}O_2$	10.05
2	9.46	Hexanoic acid	$C_6H_{12}O_2$	11.77
3	15.00	Benzaldehyde, 4-ethyl-	$C_9H_{10}O$	12.92
4	16.62	4H-Pyran-4-one, 2,3-dihydro-3,5- dihydroxy-6-methyl-	$C_6H_8O_4$	6.89
5	21.00	Ethanone, 1-(2-hydroxy-5-methylphenyl)-	$C_9H_{10}O_2$	2.58
6	22.00	Methyl 4-(hydroxymethyl) Benzoate	$C_9H_{10}O_3$	8.04
7	22.50	p-Menth-3-en-9-ol	$C_{10}H_{18}O$	3.73
8	24.51	Eugenol	$C_{10}H_{12}O_2$	1.44
9	26.00	Acetamide, N-tetrahydro furfuryl-2-methoxy-	$C_8H_{15}NO_3$	4.30
10	27.00	n-Hexadecanoic acid	$C_{16}H_{32}O_2$	12.64
11	29.57	9,12-Octadecadienoic acid methyl ester	$C_{19}H_{34}O_2$	1.03
12	30.84	Oleic acid	$C_{18}H_{34}O_2$	10.33
13	32.50	Octadecanoic acid	$C_{18}H_{36}O_2$	6.32