

Table 6 Pathway analyses in WKY rats fed diets containing 7 w/w% Tokuho oils for 4 weeks

Group	Name		Figure No.
HR	Androgen receptor signaling pathway	Down	13
	TGF-beta receptor signaling pathway	Down	16
HC	T cell receptor signaling pathway	Up	17
	Fatty acid biosynthesis	Down	6
	Nuclear receptors in lipid metabolism and toxicity	Down	18
	Wnt signaling pathway and pluripotency	Down	19
	Biosynthesis of aldosterone and cortisol	Down	20
KS	Adiogenesis	Down	21
	TGF-beta receptor signaling pathway	Down	16
	Fatty acid biosynthesis	Down	6

Up: Cont 群と比較して、2 倍以上発現が上昇する遺伝子で有意とされるパスウェイ

Down: Cont 群と比較して、0.5 倍以上発現が低下する遺伝子で有意とされるパスウェイ

Table 7 遺伝子発現の変動解析結果

C57BL/6J マウス

	Ratio	Up	Down
Cont: HR	HR/Cont	36 (0)	114 (10)
Cont: HC	HC/Cont	90 (2)	82 (6)
Cont: KS	KS/Cont	144 (15)	66 (7)

Up, Cont 群と比較して、発現レベルが 1.5 倍以上増加する遺伝子数

Down, Cont 群と比較して、発現レベルが 0.67 倍以上減少する遺伝子数

これらのうち、3 倍以上増加または 0.2 倍以上減少する胃炎指数をカッコ内に示す。

Table 8 Pathway analyses (Up) in liver of C57BL/6J mice fed diets containing 7 w/w% HC for 20 weeks

Pathways	Genes	Pathways	Genes
Steroid biosynthesis	3	Acute myeroid leukemia	2
Biosynthesis of unsaturated fatty acids	3	Glioma	2
Bladder cancer	3	Colorectal cancer	2
Terpenoid backbone biosynthesis	2	p53 signaling pathway	2
Chronic myeloid leukemia	3	Melanoma	2
PPAR signaling pathway	3	Cytokine-cytokine receptor interaction	3
Thyroid cancer	2	Small cell lung cancer	2
Cell cycle	3	ErbB signaling pathway	2
Jak-STAT signaling pathway	3	Prostate cancer	2
Endometrial cancer	2		

Table 9 Pathway analyses (Up) in liver of C57BL/6J mice fed diets containing 7 w/w% KS for 20 weeks

Pathways	Genes	Pathways	Genes
Cell cycle	6	Arachidonic acid metabolism	3
p53 signaling pathway	4	Chemokine signaling pathway	4
Retinol pathway	4	Circadian rhythm-mammal	2
Cytokine-cytokine receptor interaction	6	Drug metabolism-cytochrome P450	3
MAPK signaling pathway	6	Pathways in cancer	5
Bladder cancer	3	Thyroid cancer	2
Colorectal cancer	3	Interstinal immune network for IgA production	2
Jak-STAT signaling pathway	4	Neuroactive ligand-receptor interaction	4
Melanoma	3	Endometrial cancer	2
Steroid biosynthesis	2	Acute myeloid leukemia	2
Chronic myeloid leukemia	3	Glioma	2
Phagosome	4	Leishmaniasis	2
Metabolism of xenobiotics by cytochrome P450	3		

Table 10 Pathway analyses (Down) in liver of C57BL/6J mice fed diets containing 7 w/w% HR for 20 weeks

Pathways	Genes	Pathways	Genes
Maturity onset diabetes of the young	3	Vasopressin-regulated water reabsorption	2
Retinol metabolism	3	Jak-STAT signaling pathway	3
Metabolism of xenobiotics by cytochrome P450	3	Type II diabetes mellitus	2
Arachidonic acid metabolism	3	Huntington's disease	3
Drug metabolism-cytochrome P450	3	Complement and coagulation cascades	2
Parkinson's disease	3	Cardiac muscle contraction	2

Table 11 Pathway analyses (Down) in liver of C57BL/6J mice fed diets containing 7 w/w% HC for 20 weeks

Pathways	Genes	Pathways	Genes
Cardiac muscle contraction	3	Tight junction	3

Table 12 Pathway analyses (Down) in liver of C57BL/6J mice fed diets containing 7 w/w% KS for 20 weeks

Pathways	Genes	Pathways	Genes
Drug metabolism –other enzymes	3	Cardiac muscle contraction	2
Caffeine metabolism	2	Drug metabolism –cytochrome P450	2

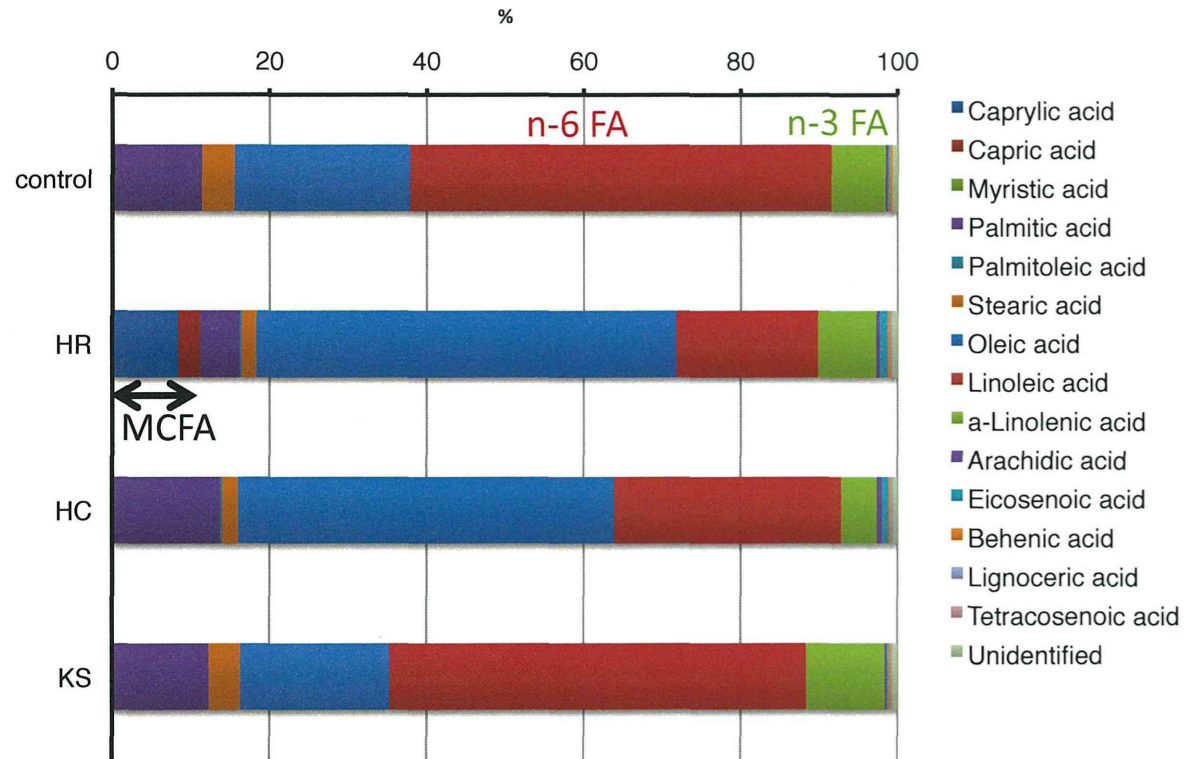


Figure 1 Fatty acid compositions of Cont, HR, HC and KS diets
n-6 FA, n-6 unsaturated fatty acid; n-3 FA, n-3 unsaturated fatty acid; MCFA, medium-chain fatty acids

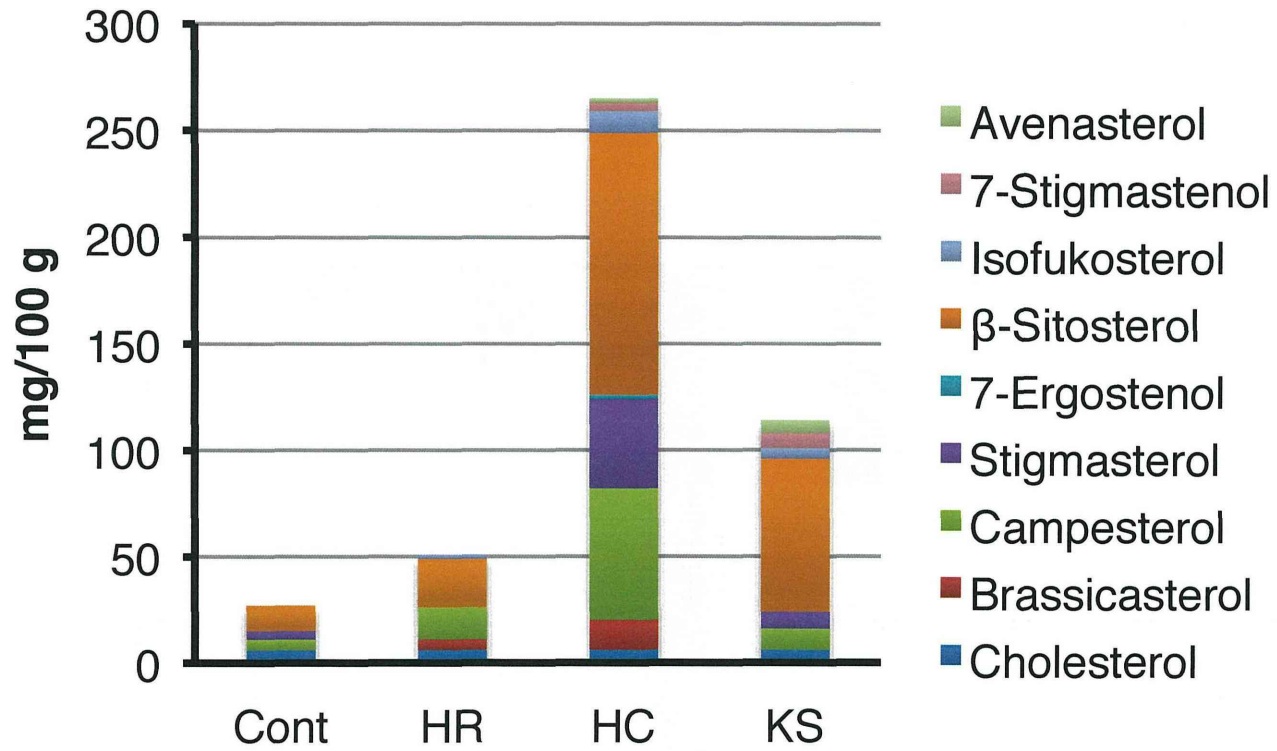


Figure 2 Sterol contents in Cont, HR, HC and KS diets (per 100 g diets)

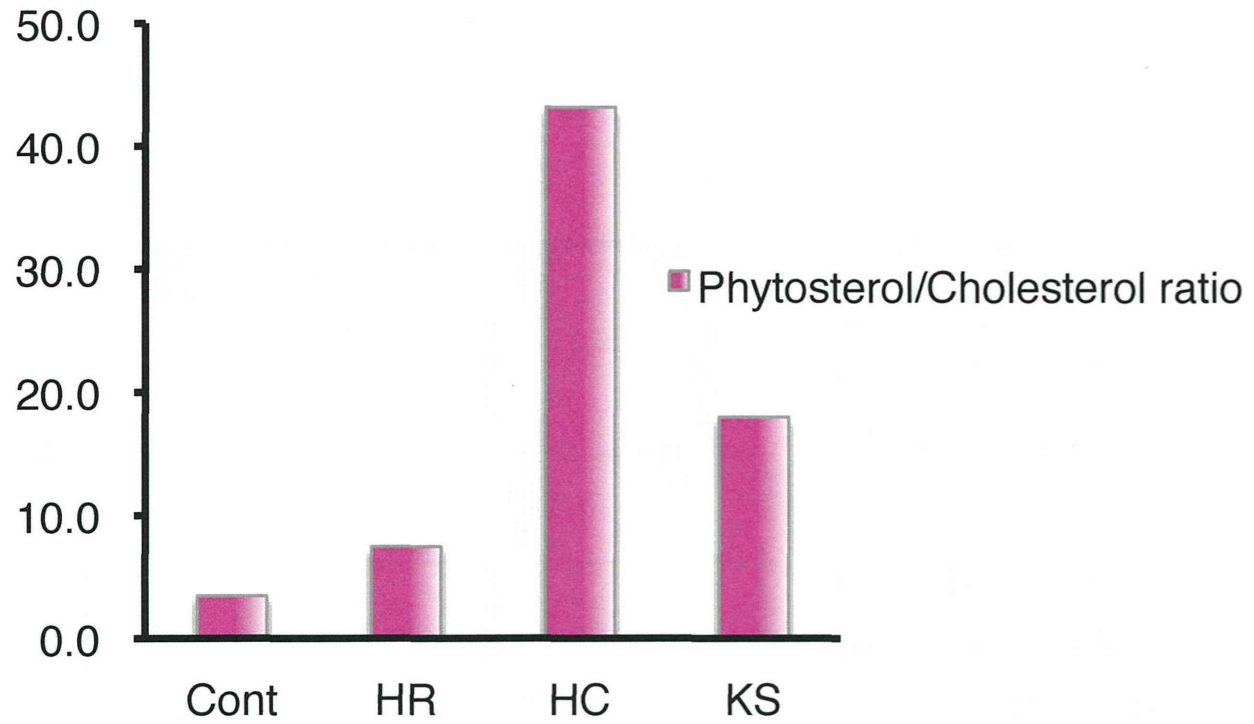


Figure 3 Phytosterol/cholesterol ratio of Cont, HR, HC and KS diets

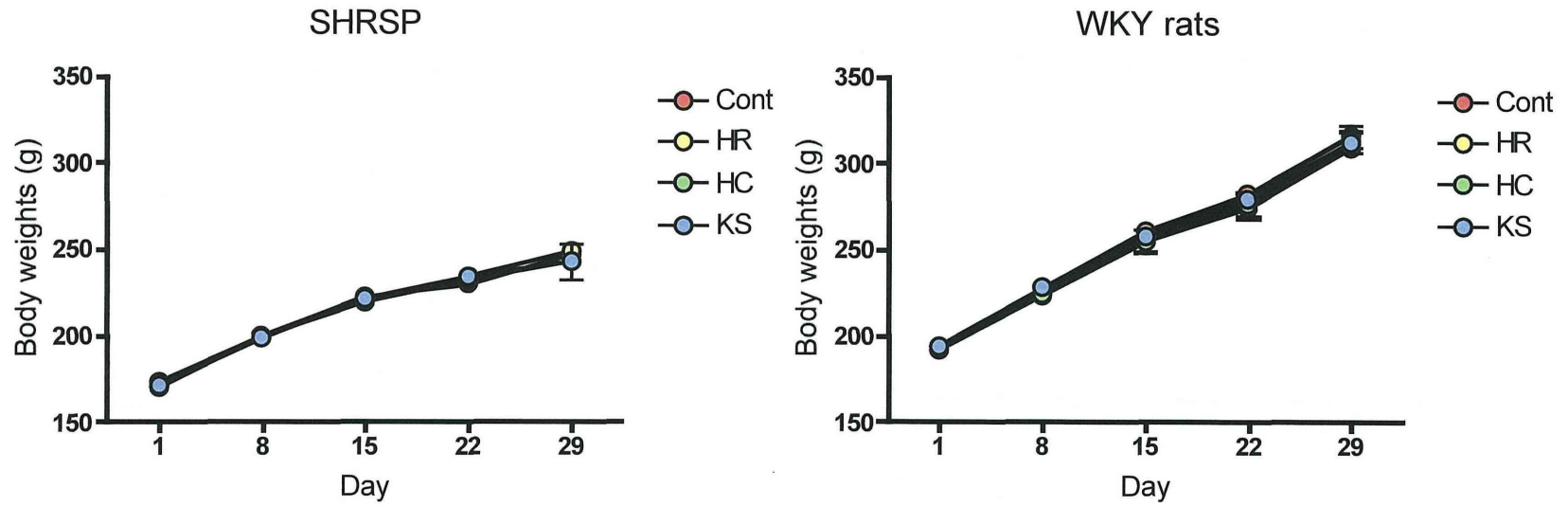


Figure 4 Body weight changes in SHRSP and WKY rats fed diets containing 7 w/w% Tokuhio oils for 4 weeks

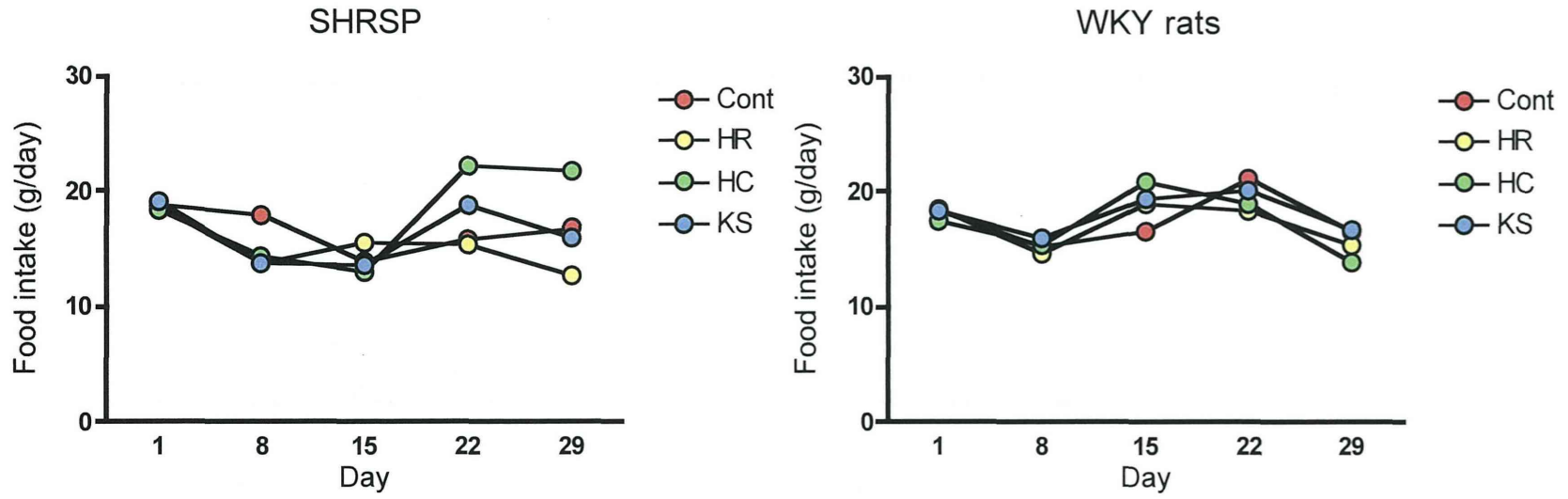


Figure 5 Food intake in SHRSP and WKY rats fed diets containing 7 w/w% Tokuho oils for 4 weeks

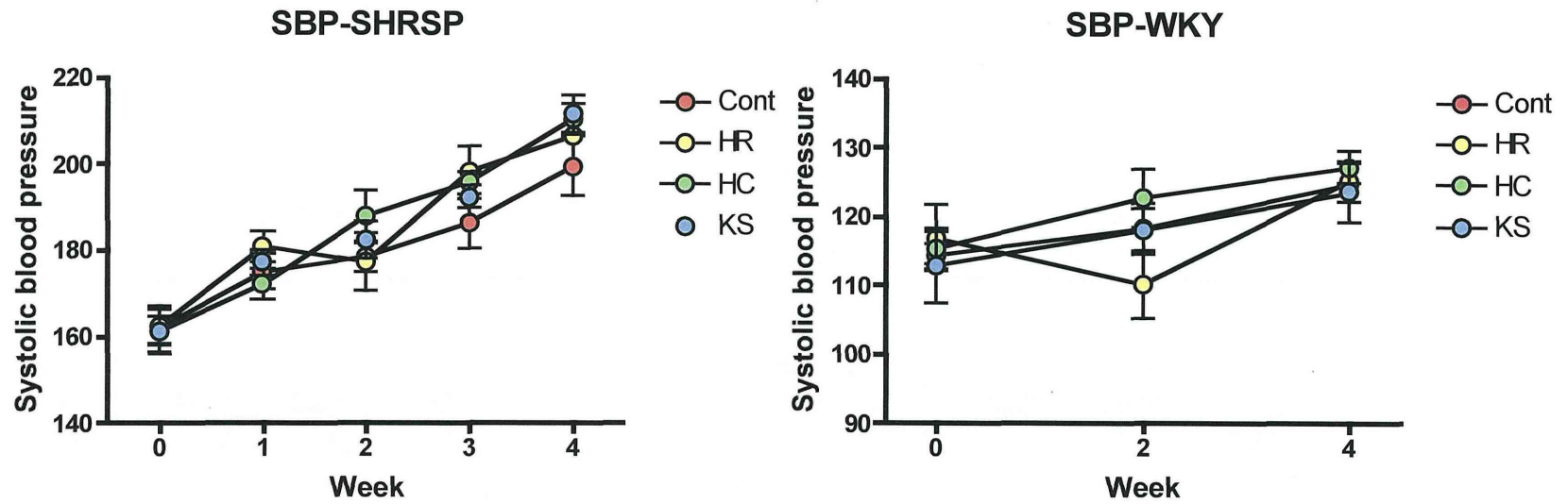


Figure 6 Systolic blood pressure in SHRSP and WKY rats fed diets containing 7 w/w% Tokuho oils for 4 weeks.

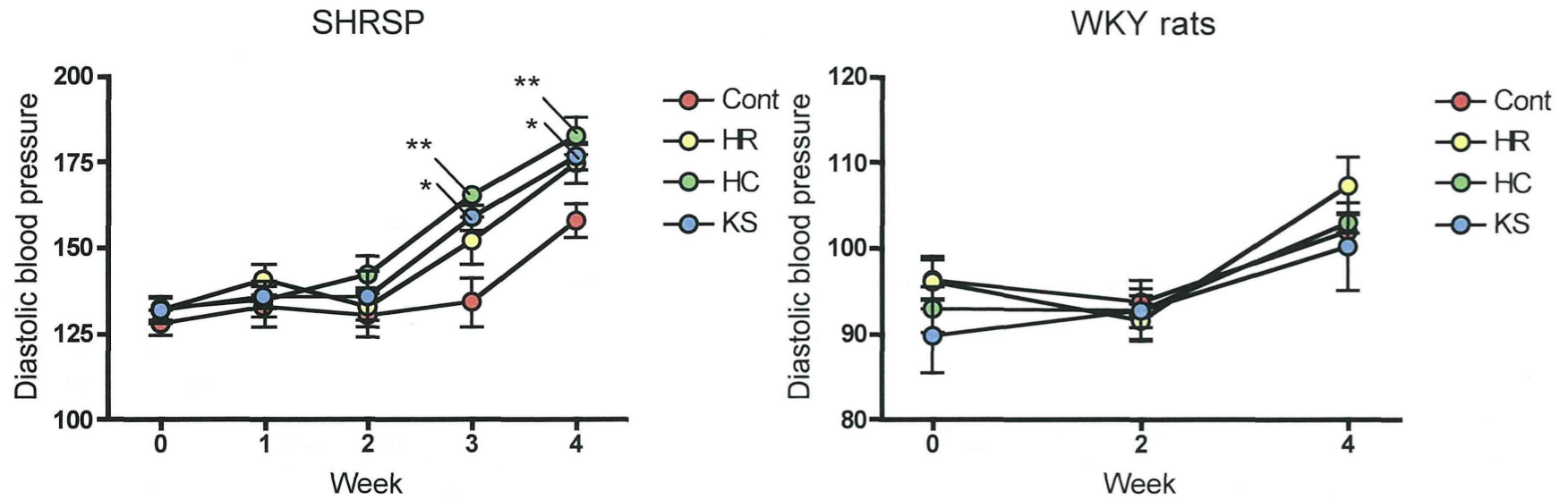


Figure 7 Diastolic blood pressure in SHRSP and WKY rats fed diets containing 7 w/w% Tokuho oils for 4 weeks. **p,0.01, *p<0.05, significantly different from the value of Cont group (Dunnett's test)

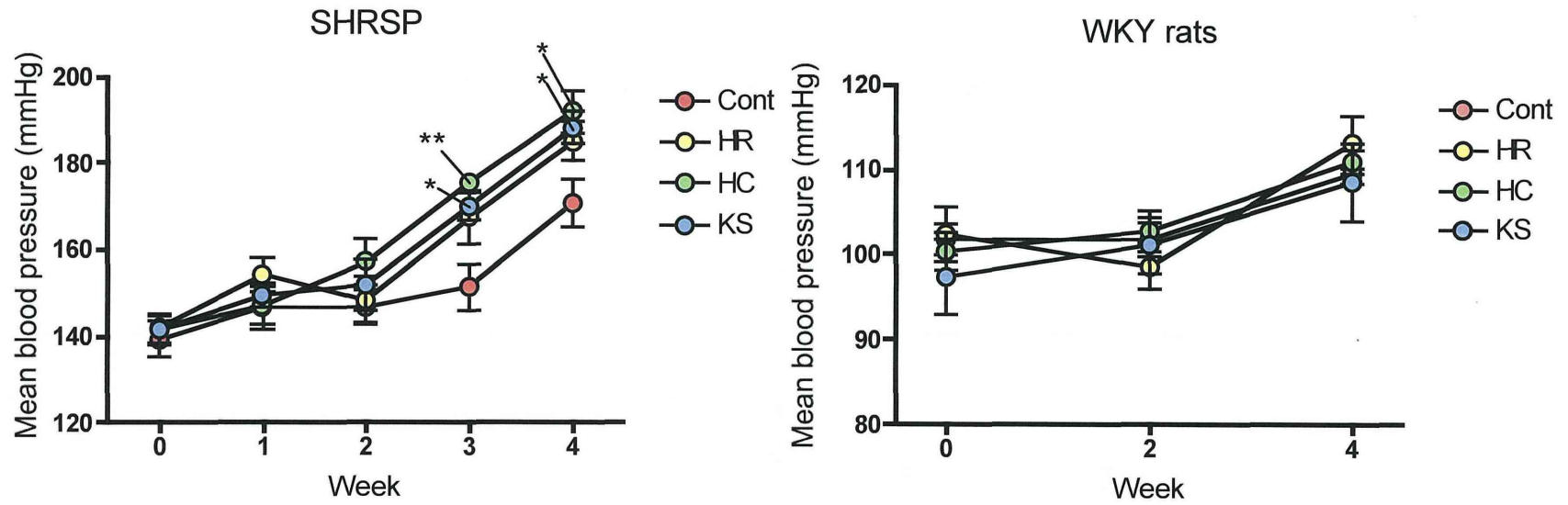


Figure 8 Mean blood pressure in SHRSP and WKY rats fed diets containing 7 w/w% Tokuho oils for 4 weeks. **p,0.01, *p<0.05, significantly different from the value of Cont group (Dunnett's test)

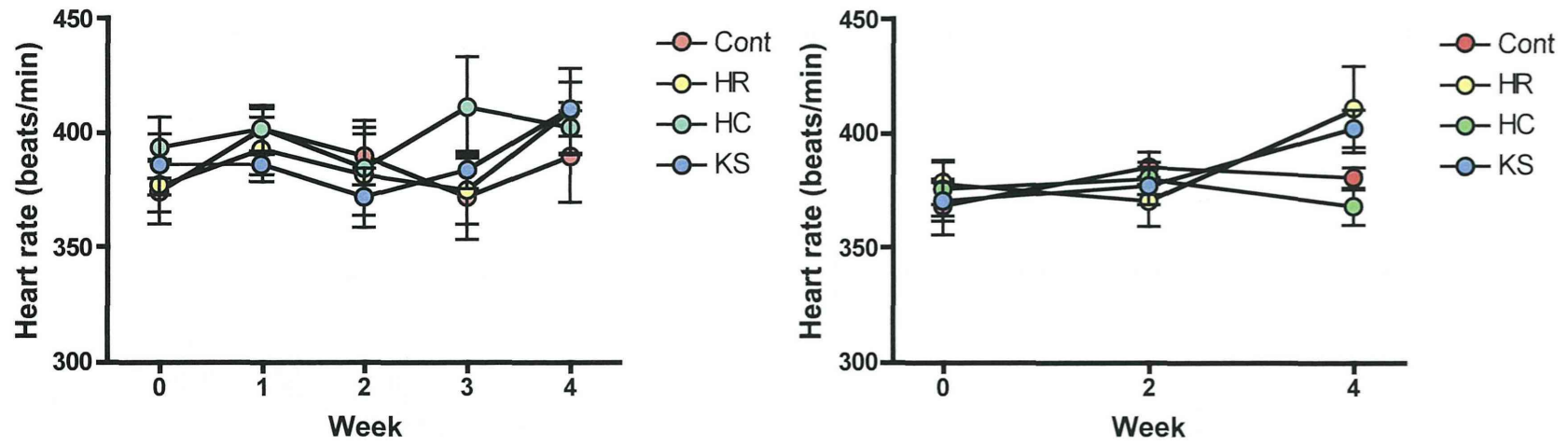


Figure 9 Heart rate in SHRSP and WKY rats fed diets containing 7 w/w% Tokuho oils for 4 weeks.

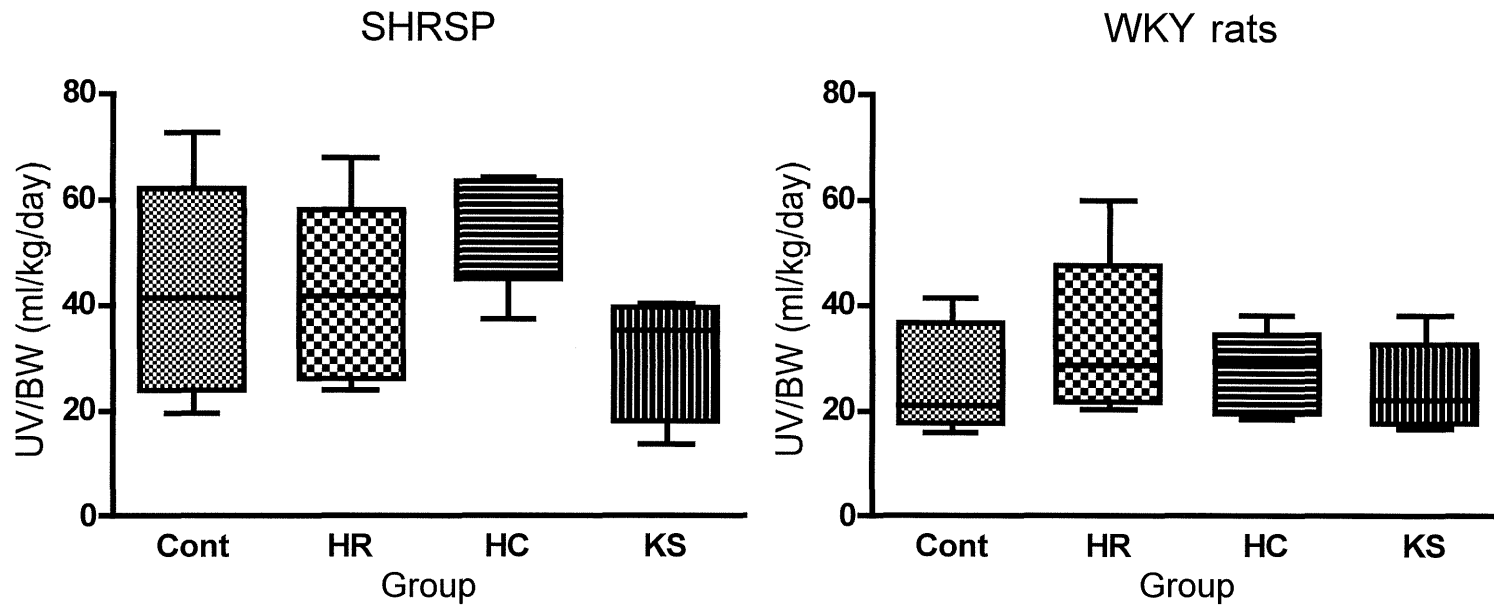


Figure 10 Urinary volume in SHRSP and WKY rats fed diets containing 7 w/w% Tokuhio oils for 4 weeks

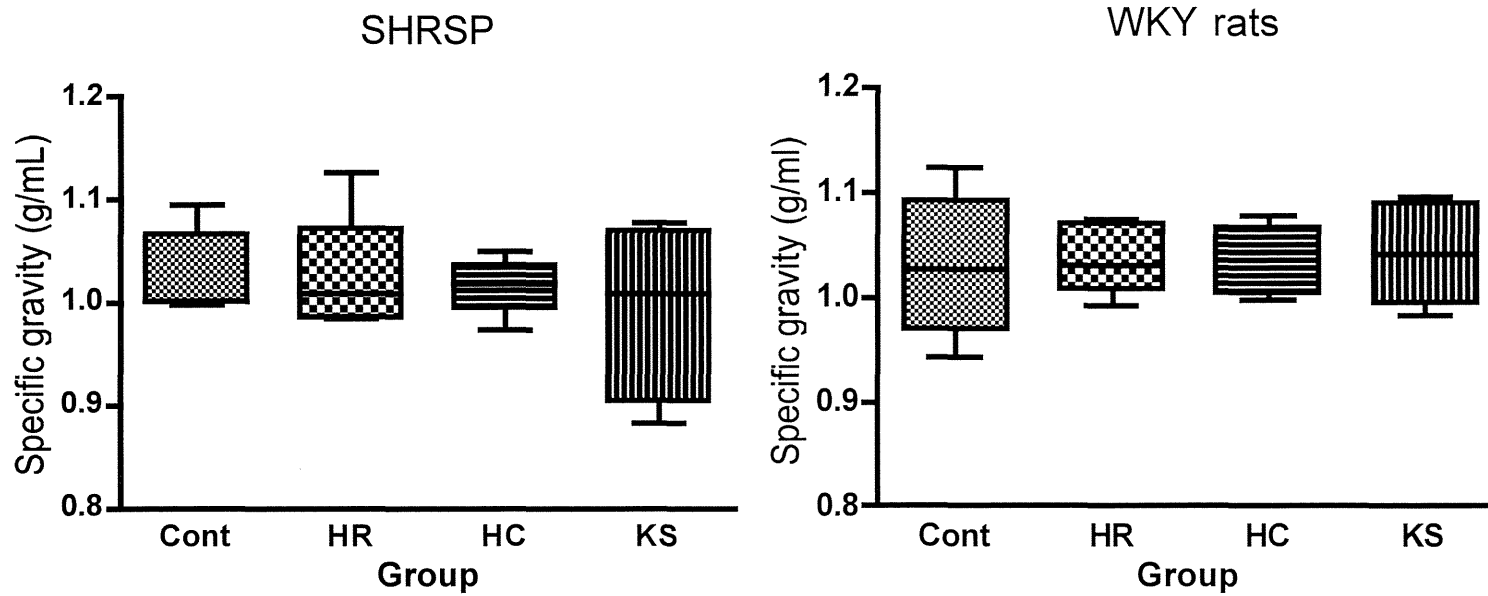


Figure 11 Specific gravity of urine in SHRSP and WKY rats fed diets containing 7 w/w% Tokuho oils for 4 weeks

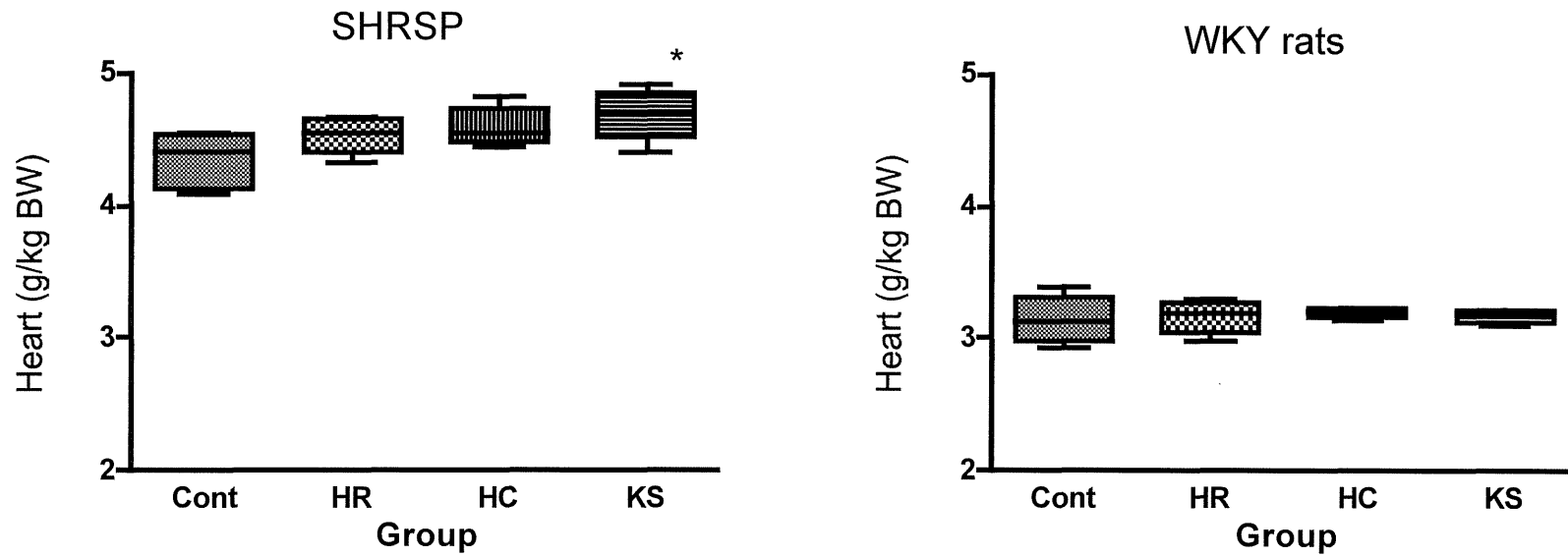


Figure 12 Relative heart weights of SHRSP and WKY rats fed diets containing 7 w/w% Tokuh oils for 4 weeks
* $p < 0.05$, significantly different from the value of Cont group (Dunnett's test)

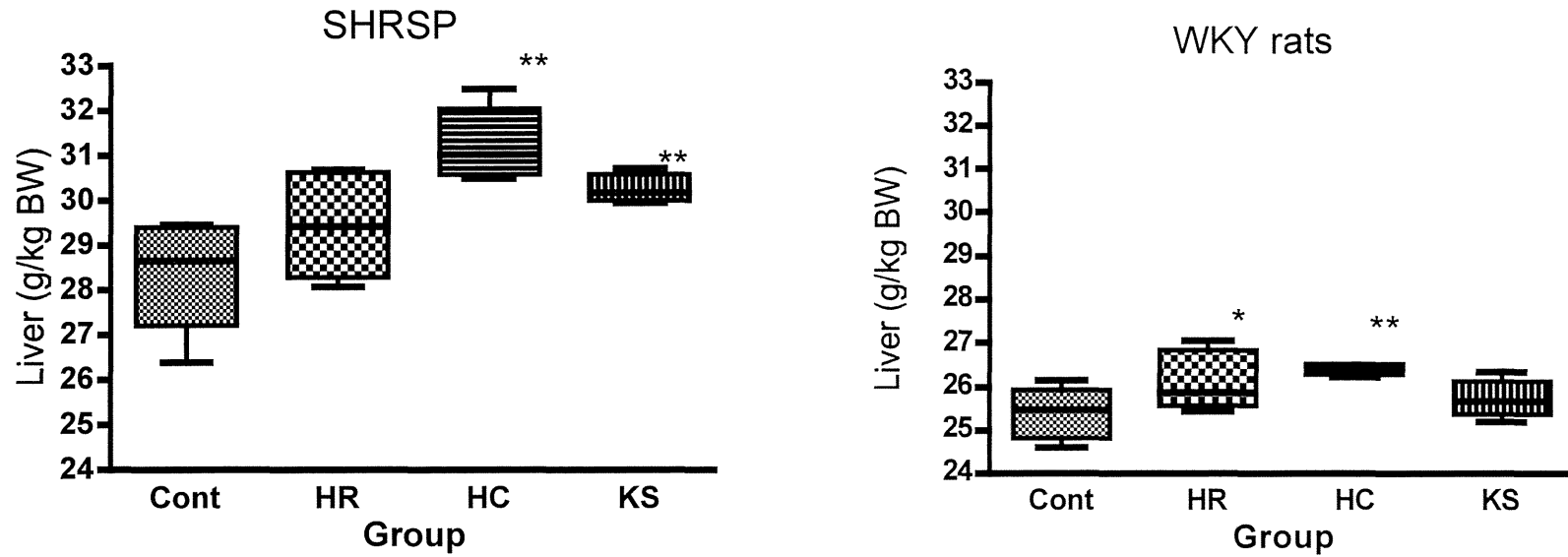


Figure 13 Relative liver weights of SHRSP and WKY rats fed diets containing 7 w/w% Tokuho oils for 4 weeks
**p,0.01, significantly different from the value of Cont group (Dunnett's test)