Supporting Information Appendix

Engineering of tomato for the sustainable production of ketocarotenoids and its evaluation in aquaculture feed

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SI text: Materials and Methods

Extraction and analysis of metabolites.

Carotenoids. Carotenoids were extracted from freeze dried tomatoes, freeze dried trout parts (fillets, livers and eyes), feces and feeds. Extractions were made in three technical replicates from sample powder (15 mg for the tomatoes and 100 mg for the trout parts, feces and feeds) in 2 mL centrifuge tubes. Metabolites were extracted by the addition of chloroform and methanol (2:1). Samples were stored for 20 min on ice. Subsequently, water (1 vol.) was added. Samples were centrifuged for 5 min at top speed in a Heraeus Pico21 centrifuge (Thermo Scientific). The organic phase, containing the pigment extract, was placed in a fresh centrifuge tube and the aqueous phase was re-extracted with chloroform (x2 by volume). Organic phases were pooled and dried using the Genevac EZ.27 (SP scientific). Dried samples were stored at -20°C and resuspended in ethyl acetate prior to spectrophotometric and chromatographic analysis.

Carotenoids were separated and identified by Ultra High Performance Liquid Chromatography with photo diode array detection (UPLC-PDA). An Acquity™ Ultra High Performance Liquid Chromatography UPLC System (Waters) was used with an Ethylene Bridged Hybrid (BEH C18) column (2.1 x 100 mm, 1.7 µm) with a BEH C18 VanGuard pre-column (2.1 x 50 mm, 1.7 µm). The mobile phase used was A: MeOH/H_2O (50/50) and B: ACN (acetonitrile)/ethyl acetate (75:25). All solvents used were High Performance Liquid Chromatography HPLC grade. The gradient was 50% A:50% B for 0.5 min and then stepped to 30% A:70% B for 4.5 min, to 0% A: 100% B for 2 min, back to 30% A: 70% B for 1 min and to 50% A:50% B for the two last minutes. Column temperature was maintained at 30°C and the temperature of samples at 8°C. On-line scanning across the ultraviolet/visible range was performed in a continuous manner from 250 to 600 nm, using an extended wavelength photo diode array detector (Waters). Carotenoids were quantified from dose-response curves made using authentic standards.

Fatty acids. Fatty acids were extracted from 20 mg of freeze dried tomato powder or 50 mg of freeze dried trout fillet powder and feed. Transmethylation was performed as follow: Methanolic-HCl 1N (1 mL) was added to the material as well as the internal standard (Heptadecanoic acid, 100 µg) and incubated at 85°C for 3 h. Hexane (500 µL) and 0.8% potassium chloride (500 µL) were added to the mixture and vortexed twice for 10 sec. The mix was centrifuged for 5 min at 2,000 rpm. The upper phase was transferred into a fresh GC vial.

Gas chromatography with flame-ionisation detector (GC-FID) analysis was performed on an Agilent 7890A with a DB-23 column. The gas chromatography oven was held for 2 min at 150°C before ramping at 10°C/min to 240°C. This final temperature was held for a further 9 min. Component identification was performed by comparison with fatty acid standards. Fatty acid quantification was achieved relative to the internal standard.

Retinoids. A retinoid extraction method was adapted from Gesto, Castro, Reis-Henriques and Santos (37). Freeze dried powdered trout livers (1 g) were vortexed for 2 min in 10 mL of methanol containing the internal standard (9-anthracenocarboxylic acid, 1 ug) and then centrifuged at 4,000 g for 15 min at 4°C. Approximately 8 mL of supernatant was collected in 15 mL Falcon tubes and 2 mL of molecular water was added before purification by solid-phase extraction (SPE). The SPE MAX cartridges (Oasis^{TM}, 6cc Vac, 30 µm, Waters) were conditioned with first 4 mL of methanol and centrifuged at 4,000 g for 1 min followed by 4 mL of molecular water, centrifuged at 4,000 g for 1 min. The supernatants were applied to the conditioned columns by centrifugation at 1,000 g for 1 min. The MAX cartridges were then washed with 4 mL of 5% NH_4OH (v/v) in water by centrifuging at 2,800 g for 1 min. The retinoids were eluted with 5 mL of methanol (1 min at 2,800 g) twice. 2% formic acid in methanol (50 µL) were added immediately to this eluate to prevent saponification. The eluate was dried by means of Genevac EZ.27 and nitrogen and stored, if necessary, at -80°C until resuspended in methanol prior to further analysis.

Retinoids were separated and identified by High Performance Liquid Chromatography with photodiode array detector (HPLC-PDA). A Waters Alliance HPLC system (UK) was used (Waters 600S controller, Waters 610 pump, Waters 996 photodiode array detector and Waters 717 plus auto-sampler) with a HiCHROM 5 µm C18 column (300 x 4.6 mm) coupled to a HiCHROM 5 C18 guard column. The mobile phases used were A: MeOH/H_2O (50/50) containing 0.01% of formic acid (by vol.) and B: MeOH with 0.01% of formic acid (by vol.). The gradient was 100% A: 0% B for 2.5 min, then stepped to 50% A: 50% B in 0.5 min then to 10% A: 90% B in 2 min and to 0% A: 100% B in 5 min. The gradient was maintained in these conditions for 15 min, and then stepped to 100% A: 0% B in 5 min. The column temperature was maintained at 30°C with a Jones Chromatography column heater/cooler. Detection was performed continuously from 220 to 600 nm with an online photodiode array detector. Retinoids were analysed at wavelengths of 325 and 350 nm. Component identification was performed by co-chromatography and comparison of spectral properties and retention times with authentic standards, when available, and reference spectra.

To complement the UV/Vis and chromatographic properties used to identify the retinoids, Mass Spectrometry (MS) was also employed. Separations were performed by HPLC (Ultimate 3000, Dionex) prior to on-line MS in a similar manner to that detailed above, with the exception that an YMC-UltraHT pro C18 (100×2.0 mm, S-2 µm) coupled to its guard column (20 x 4.6 mm) was used. The mobile phase was altered to facilitate ionisation and was comprised of (A) MeOH/H_2O (50/50) containing 0.01% of formic acid (by vol.) and (B) methanol containing 0.01% formic acid (by vol.). These solvents were used in the same gradient mode as described above except that the initial conditions (100% A) were restored for 5 min after the gradient to re-equilibrate the system. The flow rate used was 0.2 ml/min. The HPLC system was coupled to maXis^{TM} quadrupole-time-of-flight (QTOF, Bruker, Germany) equipped with an electrospray ionisation source (ESI). Parameters for analysis were set using positive ion mode, with spectra acquired over a mass range from 50 to 900 m/z. The optimum values of the ESI-MS parameters were: capillary voltage: 4500V; drying gas temperature: 190°C; drying gas flow: 8L/min; nebulising gas pressure: 1 bar. Instrument calibration was performed externally prior to each sequence with sodium formate solution (10 mM). Automated post-run internal calibration was performed by injecting the same sodium formate calibrant solution at the end of each sample run via a six port diverter valve equipped with a 20 µL loop.

Cholesterol. Cholesterol extraction from the trout fillets and livers was performed as described above for the carotenoids. An aliquot (~ 1/7th) was removed from the organic phase extract, the internal standard (myristic acid D27, 10 µg) was added and then the aliquot was dried using the Genevac EZ.27. Three extractions were performed on each biological replicate. Derivatization was performed by the addition of methoxyamine hydrochloride (30 µL, Sigma–Aldrich) at 20 mg/mL, in pyridine. Samples were incubated at 40°C for 1 h, after which MSTFA (*N* methyl-*N*-trimethylsilyltrifluoroacetamide; Sigma-Aldrich; 70 µL) was added and the samples incubated for 2 h at 40°C before analysis. Gas chromatography-mass spectrometry analysis was performed on an Agilent HP6890 (UK) gas chromatograph with a

5973MSD. Samples (1 µL) were injected with a split/splitless injector at 290°C with a 20:1 split. Retention time locking to the internal standard was used. The gas chromatography oven was held for 4 min at 70°C before ramping at 5°C/min to 310°C. This final temperature was held for a further 10 min, making a total time of 60 min. The interface with the MS was set at 290°C and MS performed in full scan mode using 70 eV EI+ and scanned from 10 to 800 D. Component identification was performed by comparison with the mass spectral characteristic and retention index of the cholesterol standard. Quantification was achieved using Chemstation (Agilent) software facilitating integrated peak areas for specific compound targets (qualifier ions) and using a dose-response curve for the cholesterol standard.

Phoenicoxanthin esters fatty acid determination. The ketocarotenoid esters found in the tomato UPLC chromatogram profile were individually isolated for further characterization. First, the ketocarotenoid esters were saponified using the cholesterol esterase from *Pseudomonas* (Sigma, UK). Protocol was adapted from Jacobs, Leboeuf, Mccommas and Tauber (39) and Stalberg, Lindgren, Ek and Hoglund (40). In brief, the organic phase pellet, obtained as described in the carotenoid extraction section, was resupended in acetone then cholesterol esterase stock solution (20 units/mL in 0.05M Tris-HCl, pH 7.0) was added (2.7:1, by vol.). The mix was incubated at 37°C for 45 min. Diethylether (20% in petroleum ether) was then added (2:1, by vol.), vortexed and centrifuged for 3 min at 3,500 rpm. The upper phase was transferred in a fresh Eppendorf tube and the lower phase was extracted a second time and the extract pooled with the first extract. Na_2SO4 anhydrous (~0.2g) was then added and the mixture was extracted twice again with 20% diethylether. The saponified ketocarotenoid esters were then analysed by HPLC following the procedure described above (Carotenoid chromatographic analysis). The saponified ketocarotenoids were identified as phoenicoxanthin by comparison of spectral characteristic and retention time value of the authentic standard.

To determine the fatty acids attached to the phoenicoxanthin esters, the compounds were analysed using mass spectrometry. Separations were performed by HPLC (Ultimate 3000, Dionex) prior to on-line MS using a RP C30 3 µm column (150×2.1 mm i.d., YMC) coupled to a 20×4.6 mm C30 guard column. The column temperature was maintained at 30°C. The mobile phase was comprised of (A) methanol containing 0.1% formic acid (by vol.) and (B) tert-butyl methyl ether containing 0.1% formic acid (by vol.). These solvents were used in a gradient mode starting at 100% (A) for 5 min, then stepped to 95% (A) for 4 min, followed by a linear gradient over 30 min to 25% (A). After this gradient (A) was a step down to 10% over 10 min. Initial conditions (100% A) were restored for 10 min after the gradient to re-equilibrate the system. The flow rate used was 0.2 ml/min. The HPLC system was coupled to maXis^{TM} quadrupole-time-of-flight (QTOF, Bruker, Germany). The ionisation mode employed was Atmospheric Pressure Chemical Ionisation (APCI) operating in positive mode. Capillary and APCI vaporisation temperatures were set at 250°C and 450°C respectively and the gas flow (nitrogen) at 4L/min. APCI source settings were as follows: nebuliser pressure 2.5 bar, corona current 4 µA and a capillary voltage of 4.5 kV. A full MS scan was performed from 300 to 1500 m/z and MS/MS spectra were recorded at the isolation width of 0.2 m/z. Identification of the fatty acids attached to the phoenicoxanthin was done by comparison with the expected mass in the MS and MS/MS profiles of the phoenicoxanthin esters. Instrument calibration was performed externally prior to each sequence with APPI/APCI calibrant solution (Agilent Technologies). Automated post-run internal calibration was performed by injecting the same APPI/APCI calibrant solution at the end of each sample run via a six port divert valve equipped with a 20 µL loop.

Phoenicoxanthin optical isomerism analysis. Fractions of phoenicoxanthin were collected and optical isomerism studied using a liquid chromatography method adapted from Wang, Armstrong and Chang (41). HPLC separations were performed using a Chiralpak IC (5 µm, 250 x 4.6 mm) column coupled with its guard column (Chromex scientific) and a Water Alliance HPLC system (Water 600S controller, Water 610 pump, Waters 996 photodiode array detector and Waters 717plus auto-sampler). The mobile phase used was methyl butyl ether /acetonitrile (50:50, v/v) isocratically for 20 min with a flow rate of 1 mL/min. The column was maintained at 26°C with a Jones Chromatography column heater/cooler. Detection was performed continuously from 220 to 700 nm with an online photodiode array detector. Ketocarotenoids were analysed at a wavelength of 470 nm. Component identification was performed by comparison of spectral properties and retention times with authentic standards and reference spectra.

Trout trials.

Feed preparation. Tomato powders were obtained by freeze drying and then homogenizing the tomatoes. The powders were made at the last minute and stored at -80°C to prevent carotenoid degradation before being shipped to the trout trial locations (Germany and Chile) for integration into the fish feeds. The ZWRI tomato extract was obtained by extracting several kilograms of frozen tomato. The method used was as follow, for 1.5 kg of frozen tomatoes, 1.5 L of acetone was added and left for two hours. Then the mixture was homogenized using a blender and 1 L of 10% diethylether in petroleum ether was added. The mixture was then filtered through two layers of Whatman filter paper using an electric pump. Subsequently, 200 mL of water saturated with salt were added to the filtrate. A glass separatory vessel was used and two phases were observed and the upper phase (red color) was collected. Anhydrous Na_2SO_4 was then added to the extract and left at -20°C for two hours. The supernatant was then collected and dried using nitrogen. Carotenoids were quantified in both the powders and extract by means of the liquid chromatographic method described above.

The composition of the feeds are described in Table S2 & S3. Figure S3a gives an overview of the composition of the different feeds.

Statistical power of the study. A Post-hoc power analysis was performed to assess the statistical power of the study. A power of 100% was obtained when comparing the trout from the fresh water experiment (N=15), 95.6% when comparing the trout from the fresh water experiment to the 60 days trout of the brackish experiment (N=10) and 89.7% when comparing the trout from the fresh water experiment to the 80 days trout of the brackish experiment (N=5). The study of the presence/absence of ketocarotenoids in the flesh of the trout only required N=3 to have a power of 100%.

Statistical analysis. For the study of plant material, three to five biological replicates with three technical replicates per biological replicates were analysed for every experiment. For the study of the trout material, five to fifteen biological replicates with three technical replicates per biological replicate were investigated for each experiment unless stated otherwise. IBM SPSS Statistics 21 software was utilized to determine significant differences between groups. First, the choice of the most appropriate statistical test was made based on several assumptions. For instance, for the one-way ANOVA statistical test, the following assumptions had to be met: 1, there is one dependent variable that is measured at the continuous level; 2, there is one independent variable that consists of two or more categorical**,** independent groups; 3, there is independence of observations.

The outliers were then studied using boxplot analysis. Any data points that were more than 1.5 box-lengths from the edge of their box were classified as outliers. Only extreme outliers (3 box-lengths from the edge of their box) were removed from the dataset. In all the analyses performed, they never represented more than 10% of the data points. The normality was then tested with a Shapiro-Wilk test and subsequently the homogeneity of variance with a Levene test. Depending on the results of the assumptions, the statistical test varied slightly. For instance, if homogeneity of variance was assumed in the one-way ANOVA test, a Tukey post Hoc test was performed. However, if this assumption was violated, a Games-Howell post Hoc test was used. P-values were calculated and represented in figures as follow: $P < 0.05$, $P < 0.01$, and $P < 0.001$ were indicated by *, **, and ***, respectively, when appropriate. Table S7 describes all the statistical tests performed in this paper and all the p-values obtained with the SPSS software.

Randomization. Randomization technique was used whenever possible. For the trout trials, the different feed conditions (basic feed, control tomato feed, ZWRI tomato feed, ZWRI extract feed and commercial feed) were assigned to the tanks randomly. For samples analysis, the samples were extracted and analyzed in the different instruments in a random order. The Microsoft Excel software was used to create randomized sequences.

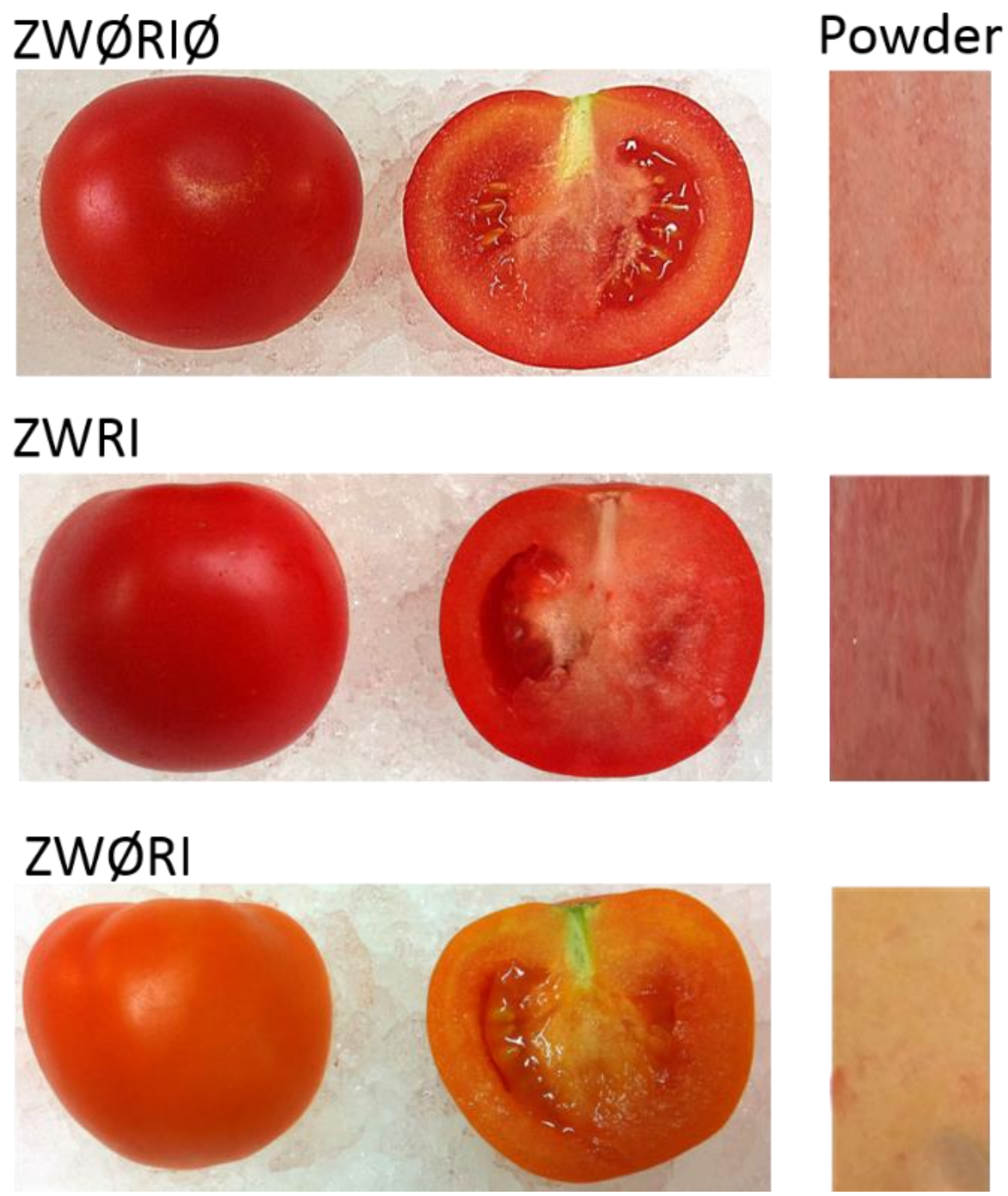

Fig. S1 ZWRI tomato and azygous controls phenotypes. Photographs of ZWøRIø, ZWRI and ZWøRI halves are shown to depict their different colors as the photographs of the powders obtained by freeze-drying these tomatoes.

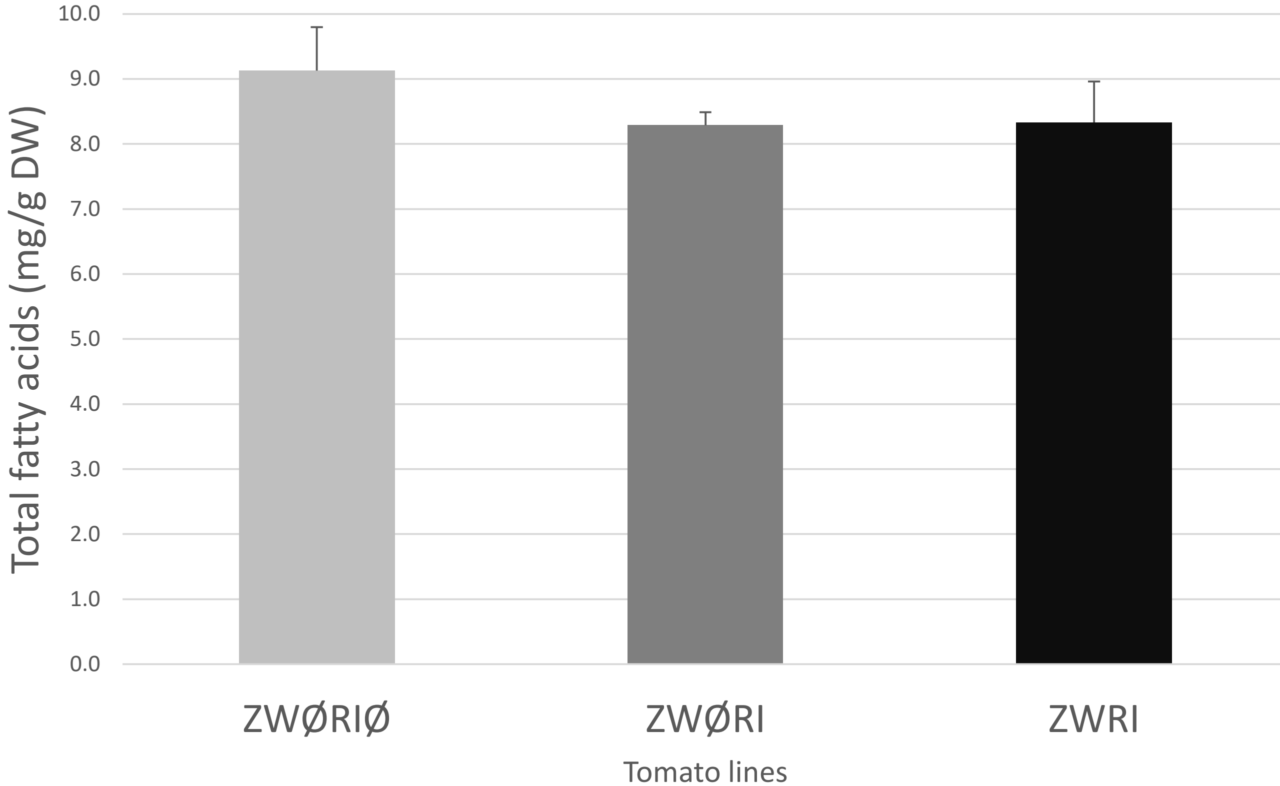

Fig. S2 Total fatty acid quantification in ZWRI tomato and azygous controls. Fatty acids contents are presented as mg/g DW. Three representative fruits from three plants were analysed. The fruits were pooled and three determinations were made per sample. The mean data are presented ± SD. Computed p-values for each comparison are tabulated in Table S7.

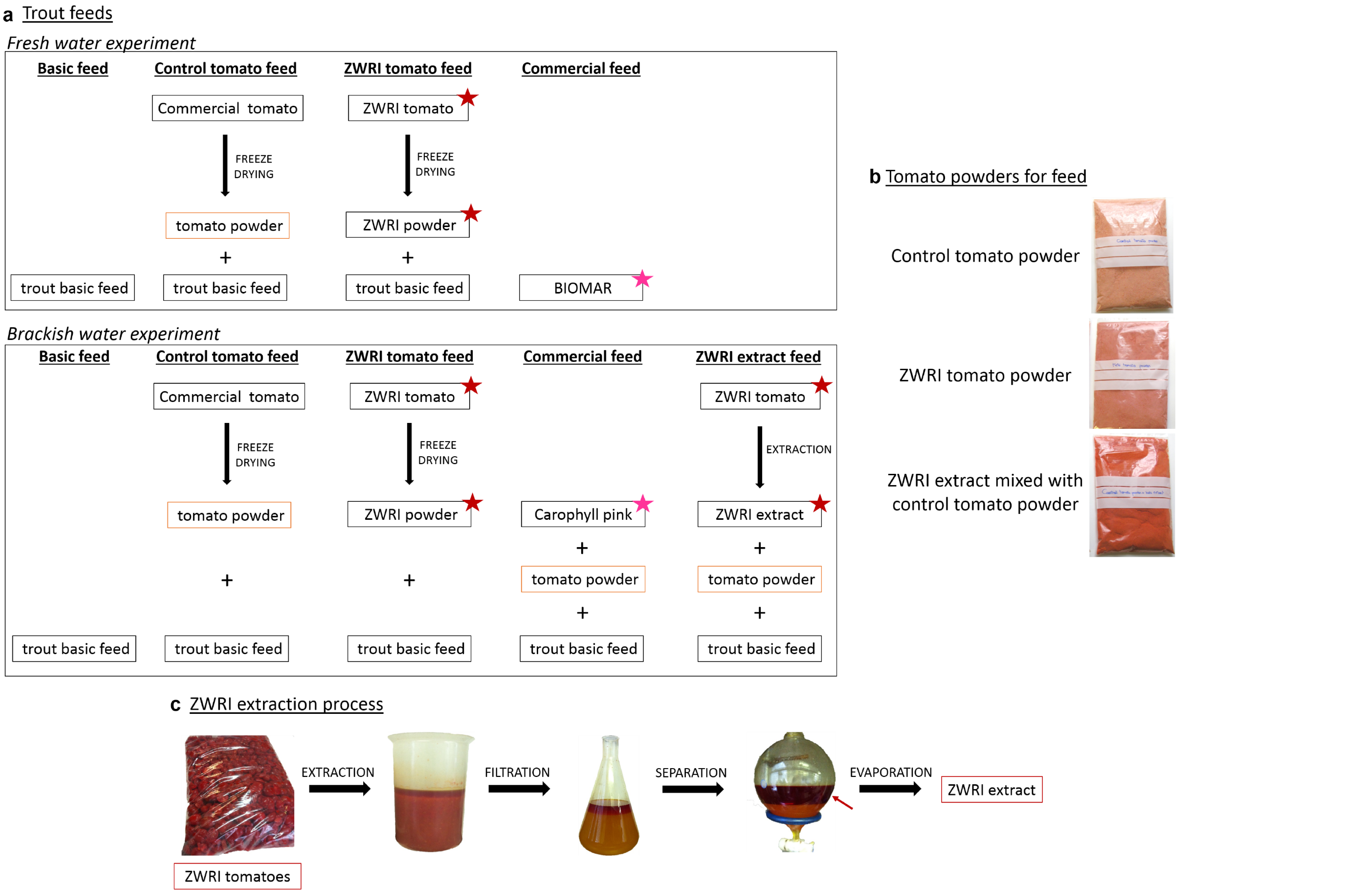

Fig. S3 Feeds processing. (a) Description of the process and composition of the feeds used for the fresh and brackish water trout trials. The star denotes the presence of ketocarotenoids, in red the ZWRI tomato ketocarotenoids and in pink the commercial astaxanthin. (b) Freeze-dried tomato powders used for the feed making. Photographs of control tomato and ZWRI tomato powders as well as ZWRI extract mixed with control tomato powder are shown. (c) ZWRI extraction process. A series of photographs describe how the ZWRI extract was obtained from the ZWRI tomatoes. The red arrow points at the phase containing the ketocarotenoids.

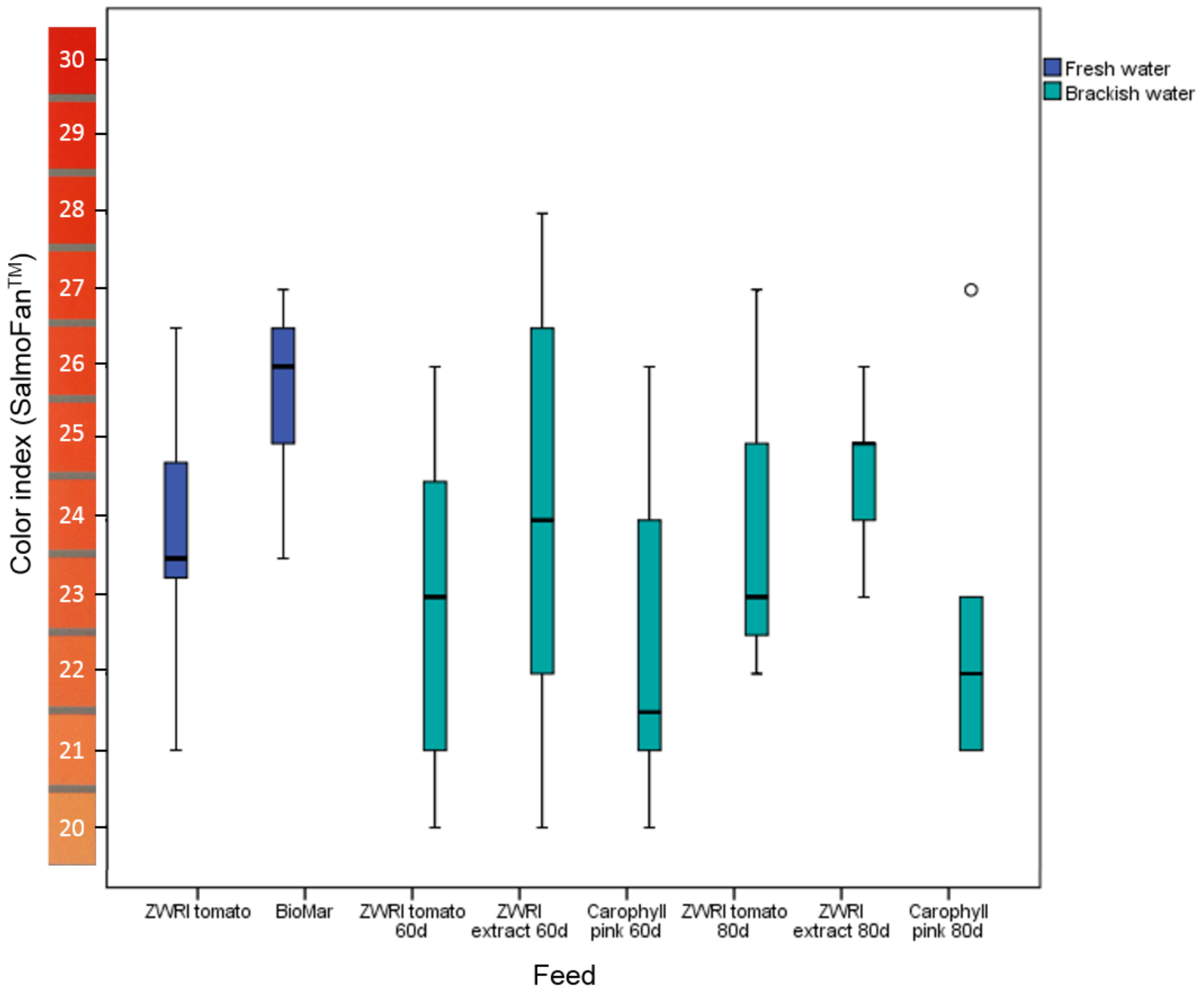

Fig. S4 Trout fillet color measurement with SalmoFan™. At the end of each trial (fresh and brackish water), a color index was attributed to each trout fillet by direct comparison with a color fan. Commercial feeds used were BioMar and Carophyll pink ® for the fresh and brackish water trials, respectively. The data are represented as box-and-whisker plots. The lines in the boxes design the median and the whiskers depict the smallest and largest values. The circle represents an outlier defined by the SPPS statistical software. Fish that did not undergo normal development are not shown. N=15, N=10 and N=5 for the fresh water, brackish water (60 days) and (80 days) trials, respectively.

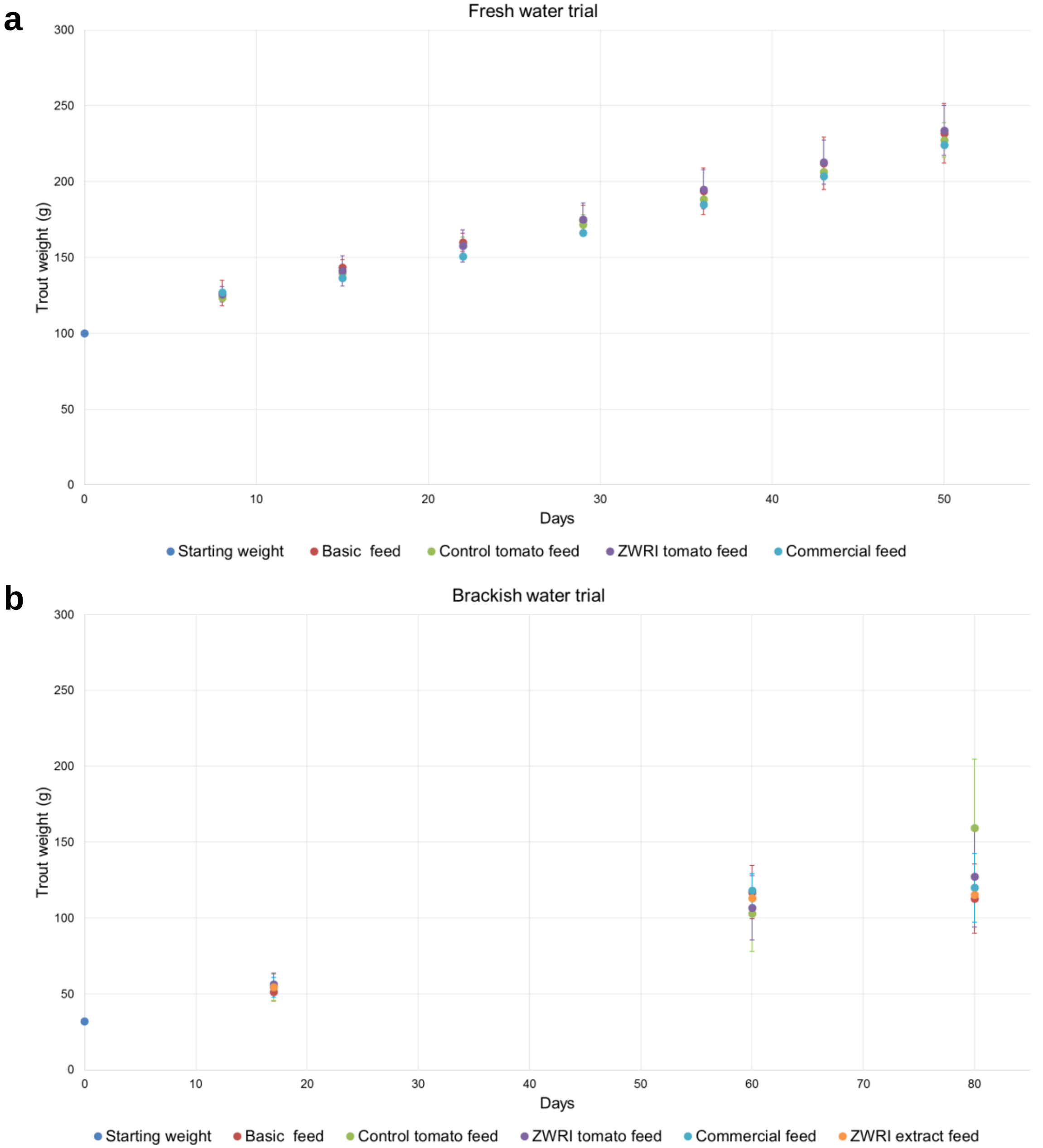

Fig. S5 Trout weight throughout trials. Trout weight was measured per tank (N=3) in the fresh water trial and per individual in the brackish water trial (N=15 up to 60 days then N=5) at several time points during the trials. The mean data are represented ± SD. No significant difference of trout weight was observed in the various feed treatments. Computed p-values for each comparison are tabulated in Table S7.

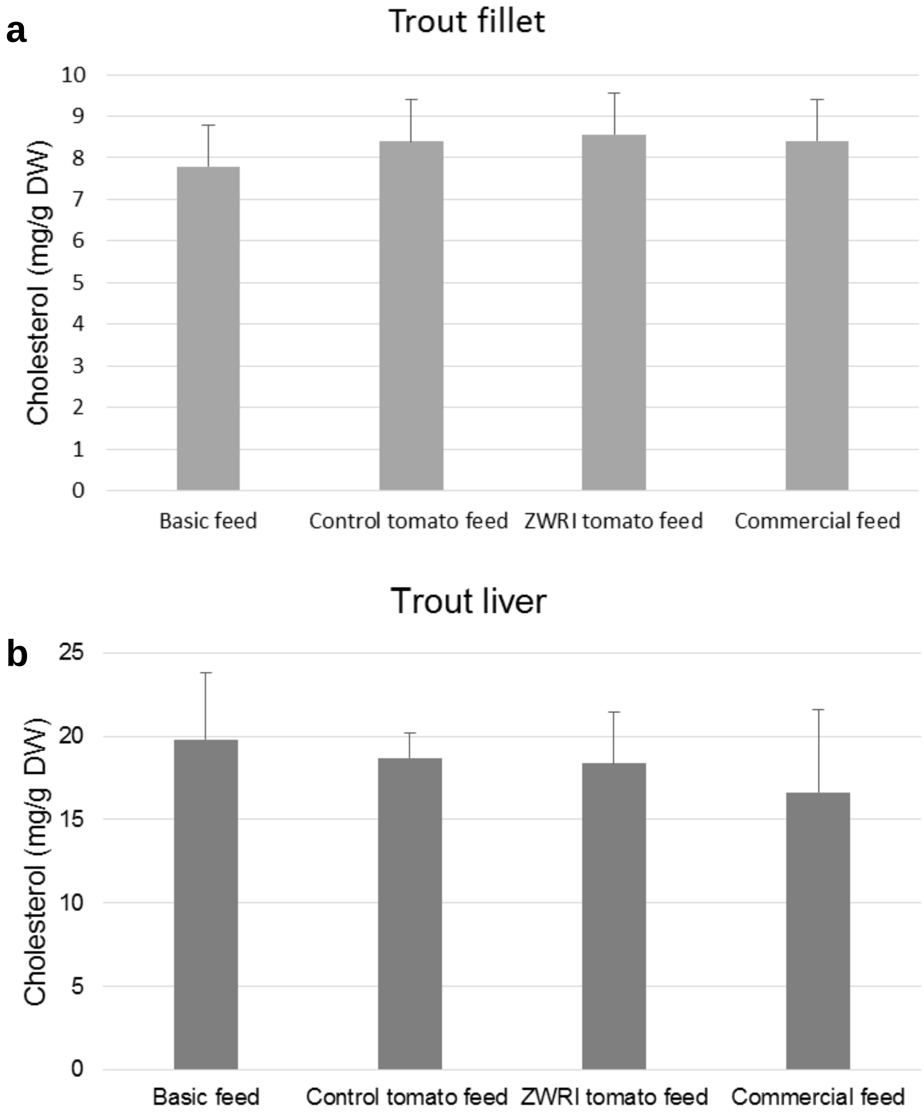

Fig. S6 Cholesterol levels in trout fillets and livers. (a) Cholesterol levels in trout fillets of the fresh water trial. Cholesterol was quantified in 15 trout fillets for each feed treatment. (b) Cholesterol levels in trout livers of the fresh water trial. Livers were pooled per tank (N=10) and then analysed (N=3) for each feed treatment. The data are represented as mean ± SD. No significant difference in cholesterol levels was observed in the fillets and livers from the various feed conditions. Computed p-values for each comparison are tabulated in Table S6.

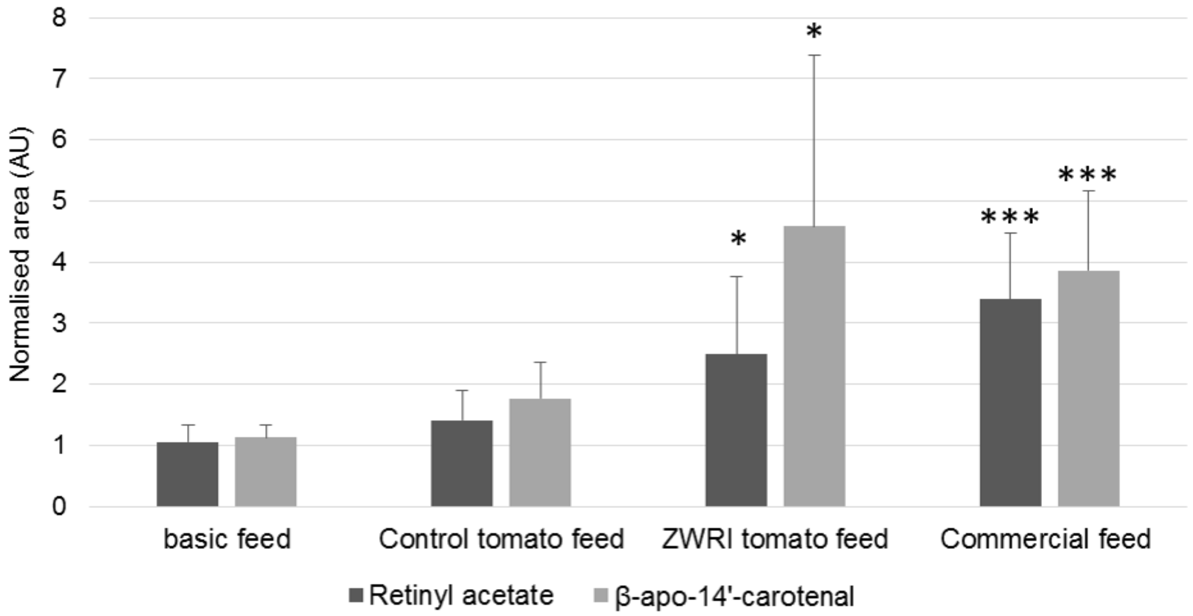

Fig. S7 Retinyl acetate and β-apo-14′-carotenal levels in trout livers. Livers from trout of the fresh water trial were pooled per tank (N=10) and then analysed (N=3) for each feed treatment. The data are represented as mean ± SD. The black stars indicate a significant difference compared to the basic feed. Computed p-values for each comparison are tabulated in Table S7. *, P<0.05 and ***, P<0.001.

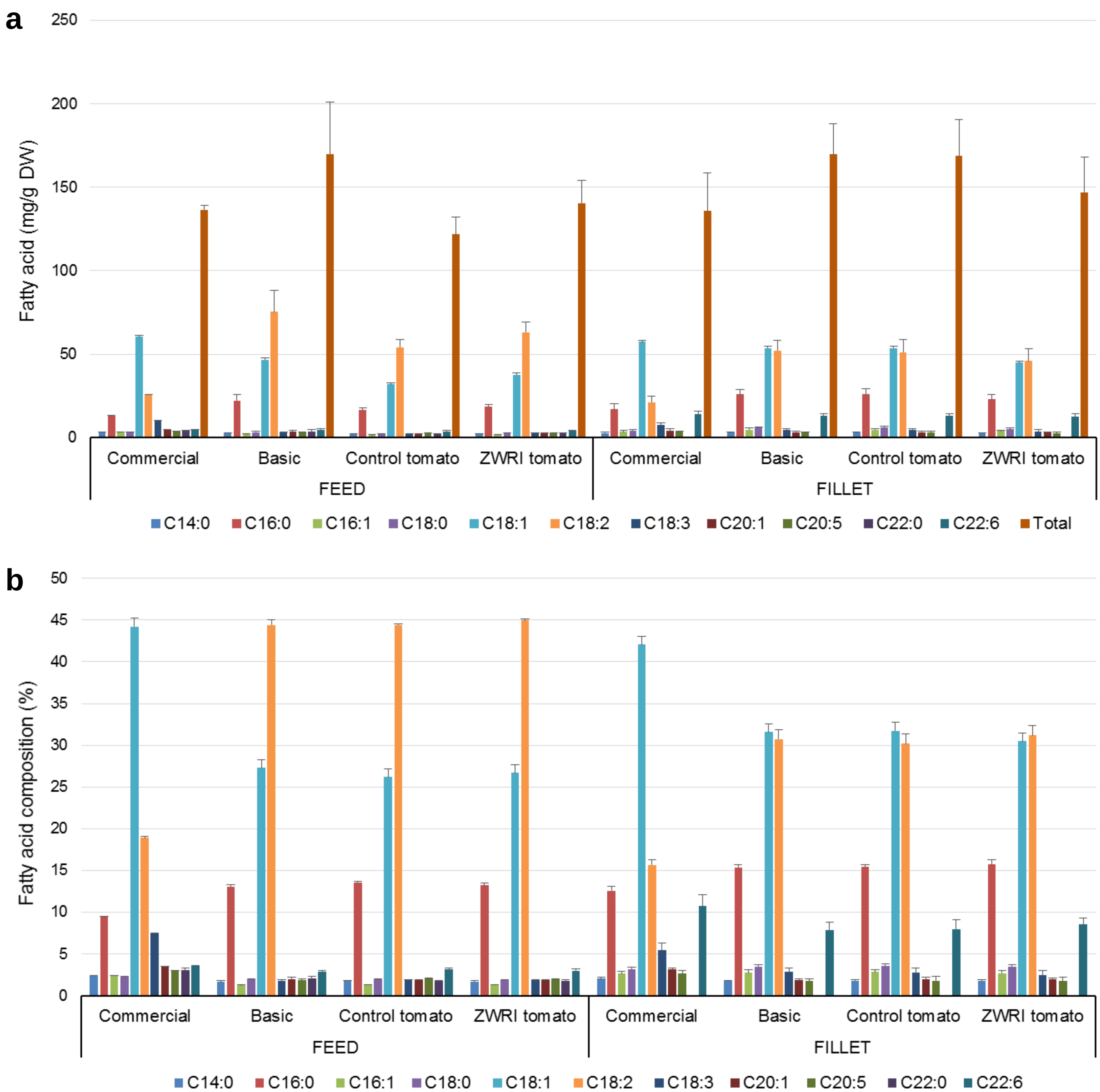

Fig. S8 Fatty acid quantification and composition in feeds and trout fillets. (a) Fatty acid levels in the feeds and trout fillets of the fresh water trial. Fatty acid contents are presented as mg/g DW. Computed p-values for each comparison are tabulated in Supplementary Table 6. (b) Fatty acid composition in the feeds and trout fillets of the fresh water trial. Fatty acids contents are presented as percentages. N=3 for the feeds and N=15 for the fish fillets.
The mean data are presented ± SD. Computed p-values for each comparison are tabulated in Table S7.

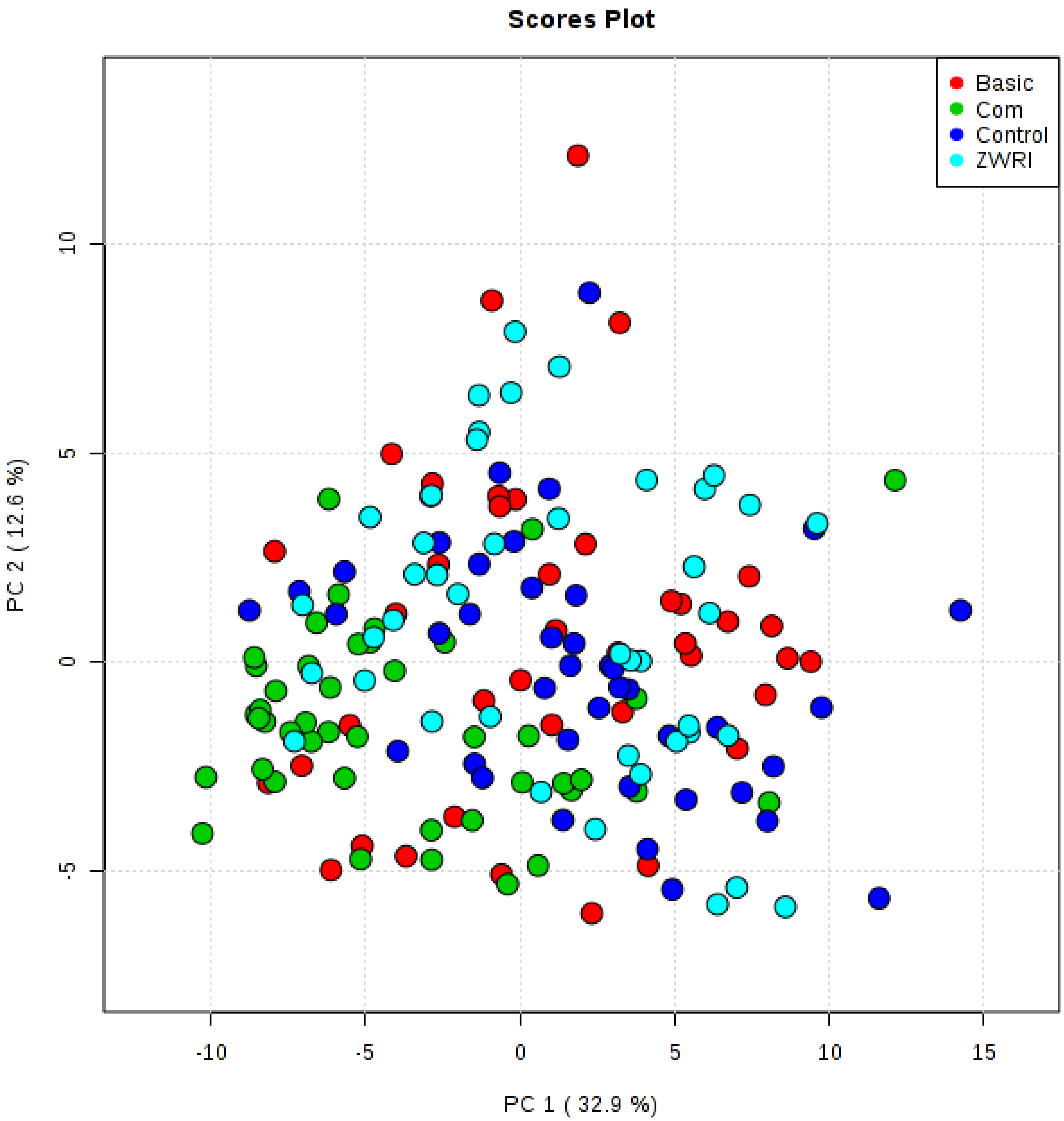

Fig. S9 Principal components analysis of non polar compounds in trout fillets. Fillets of trout fed with four feeding treatments (Basic; basic feed, Com; commercial feed, Control; control tomato feed, ZWRI; ZWRI tomato feed) were compared based on 56 non polar compounds analysed by GC-MS. N=15. The different feeding treatments do not have an effect on the fillet compounds studied.

Table S1. Carotenoid content in ZWRI tomato line and azygous controls grown in greenhouse or polytunnel condition

	Greenhouse								Polytunnel					
Carotenoid (µg/g DW)	ZWØRIØ	%	ZWØRI	%	ZWRIØ	%	ZWRI	%	ZWRI early season	%	ZWRI late season	%	Standard tomato	%
Phytoene	667 ± 245	**12**	97 ± 13	**6**	68 ± 22	**2**	79 ± 20	**2**	77 ± 7	**3**	42 ± 5	**2**	36 ± 5	**2**
Phytofluene	644 ± 173	**11**	111 ± 10	**7**	463 ± 161	**14**	73 ± 3	**2**	84 ± 3	**3**	65 ± 3	**3**	296 ± 93	**13**
Neurosporene			100 ± 2	**6**										
cis-Lycopene	91 ± 27	**2**											73 ± 11	**3**
Lycopene	3859 ± 625	**68**	61 ± 18	**4**	2543 ± 411	**77**							1476 ± 339	**67**
γ-Carotene	72 ± 7	**1**	72 ± 4	**4**									78 ± 1	**4**
β-Cryptoxanthin					48 ± 13	**1**								
β-Carotene	205 ± 86	**4**	1112 ± 122	**66**	41 ± 3	**1**	266 ± 54	**8**	390 ± 34	**14**	11 ± 2	**8**	120 ± 8	**5**
δ-Carotene					51 ± 6	**2**							86 ± 1	**4**
Lutein	155 ± 11	**3**	143 ± 7	**8**									151 ± 27	**7**
Echinenone							76 ± 10	**2**	96 ± 9	**3**	54 ± 7	**3**		
3-OH-Echinenone							17 ± 2	**1**	19 ± 3	**1**	12 ± 1	**1**		
3′-OH-Echinenone							125 ± 19	**4**	105 ± 46	**4**	98 ± 14	**5**		
Canthaxanthin					8 ± 8	**0**	899 ± 151	**28**	873 ± 62	**31**	634 ± 144	**32**		
Phoenicoxanthin					15 ± 6	**0**	594 ± 142	**18**	478 ± 27	**17**	335 ± 54	**17**		
Astaxanthin					47 ± 9	**1**	83 ± 15	**3**	80 ± 4	**3**	47 ± 4	**2**		
Phoenicoxanthin-C14:0					nq		553 ± 79	**17**	300 ± 20	**11**	183 ± 38	**9**		
Phoenicoxanthin-C16:0					nq		298 ± 54	**9**	174 ± 21	**6**	209 ± 76	**11**		
Adonixanthin-C14:1							130 ± 27	**4**	106 ± 14	**4**	72 ± 27	**4**		
Adonixanthin-C16:1							71 ± 18	**2**	63 ± 16	**3**	57 ± 7	**3**		
Total ketocarotenoids	0	**0**	0	**0**	74 ± 30	**2**	2845 ± 353	**87**	2294 ± 163	**81**	1701 ± 252	**86**	0	**0**
Total	5693 ± 805		1697 ± 105		3287 ± 341		3263 ± 398		2846 ± 185		1971 ± 275		2217 ± 572	
N	3		3		5		4		4		4		3	

Carotenoid levels are represented as µg/g dry weight and in bold figures as percentages. Three representative fruits of *N* plants were used. The fruits were respectively pooled and three determinations were made. The mean data are shown as ± SD. Nq signifies that a compound has been detected but it is under the level of quantification. Polytunnel condition are defined by a polytunnel structure, without extra heating and lighting. Computed p-values for the comparison of ZWRI tomatoes grown in the greenhouse and the polytunnel are tabulated in Table S7.

Table S2. Composition of the feeds used in the fresh and brackish water trout trials.

	Fresh water experiment				Brackish water experiment				
	Basic	Control tomato	ZWRI tomato	Commercial	Basic	Control tomato	ZWRI tomato	ZWRI extract	Commercial
Basic feed (g)#	1000.0	1000.0	1000.0	1000.0	1000.0	1000.0	1000.0	1000.0	1000.0
Cellulose (g)	33.6	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control tomato powder (g)	0.0	33.6	0.0	0.0	0.0	38.0	0.0	37.2	37.6
ZWRI tomato powder (g)	0.0	0.0	33.6	0.0	0.0	0.0	38.0	0.0	0.0
ZWRI extract (g)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0
Carophyll pink® (g)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Expected ketocarotenoids (mg/kg DW)	**0.0**	**0.0**	**75.0**	**75.0**	**0.0**	**0.0**	**80.0**	**80.0**	**80.0**
Quantified ketocarotenoids (mg/kg DW)	**0.0**	**0.0**	**35.6**	**143.6**	**0.0**	**0.0**	**40.1**	**59.8**	**42.0**

Data are expressed as g or mg/kg dry weight. # Basic feeds used for the basic and commercial treatment of the fresh water trial and the basic treatment of the brackish water trial are described in Supplementary Table 3. ZWRI tomato powder and ZWRI extract contained 2.1 mg/g DW and 9.6% of coloring ketocarotenoids, respectively. The Carophyll pink® granules batch used included 18% of coloring ketocarotenoids (15% of astaxanthin and 3% of unknown ketocarotenoid-1).

Table S3. Composition and proximal analysis of the basic feeds used in the fresh and brackish water trout trials.

a

	Fresh	Brackish
Wheat Gluten	18.5	
Fish Meal	41.7	43.5
Corn Oil (Mazola)	13.9	
Canola oil		7.6
Fish Oil	3.2	15.3
Dextrin	9.3	
Cellulose	0.4	
Wheat starch	9.3	
Wheat flour		10.0
Poultry viscera meal		13.0
Feather meal		8.0
Minerals	1.9	0.4
Vitamins	0.9	2.0
$Ti0_2$	0.9	
Stay-C	0.1	

Composition of the basic feeds. Data are represented as percentage.

b

	Fresh		Brackish
	Basic feed	Commercial feed	Basic feed
Crude protein (%)	42.1	40-43	44.2
Crude lipid (%)	22.1	20-23	24.5
Carbohydrates (%)		21	5.4
Fibre (%)		4,2	7.9
Ash (%)		6,0	8.7
Total phosphorus (%)		0,8	
Typical content of nitrogen (%)		6,6	
Humidity (%)			9.4
Digestible Energy (MJ/kg)	16.8	18,3	
Gross energy (MJ/kg)		20-23	
Energy (Kcal)			418.3

Proximal analysis of the basic feeds. Proximal analysis of basic feeds used for the fresh and brackish water experiments are shown as well as the one of the commercial feed (BioMar) used is the fresh water trial (as it was not made with the "self-made" basic feed used for the other treatments).

Table S4. Carotenoid content in feeds utilised for the fresh and brackish trout trials

Carotenoid (µg/g DW)	Basic		Control tomato		ZWRI tomato		ZWRI extract	Commercial	
	Fresh	Brackish	Fresh	Brackish	Fresh	Brackish	Brackish	Fresh	Brackish
Lycopene			15.3 ± 0.6	23.5 ± 1.3			27.6 ± 1.8		19.5 ± 0.7
β-Carotene			5.8 ± 0.3	6.9 ± 0.2	11.3 ± 0.6	12.6 ± 0.3	15.5 ± 0.2		6.7 ± 0.0
Lutein	0.5 ± 0.0	0.2 ± 0.0	1.2 ± 0.1	0.6 ± 0.0	0.3 ± 0.0	0.1 ± 0.0	0.6 ± 0.2	10.4 ± 4.6	
Echinenone					2.4 ± 0.3	3.0 ± 0.1	3.3 ± 0.0		
3-OH-Echinenone					1.0 ± 0.2	0.2 ± 0.0	0.2 ± 0.0		
3′-OH-Echinenone					2.0 ± 0.2	3.6 ± 0.1	4.7 ± 0.2		
Canthaxanthin					8.9 ± 1.5	12.4 ± 0.2	16.8 ± 0.4		
Phoenicoxanthin					5.6 ± 1.2	8.2 ± 0.2	11.9 ± 0.3		
Astaxanthin					1.8 ± 0.3	1.6 ± 0.3	1.6 ± 0.1	132.8 ± 15.4	39.2 ± 0.5
Phoenicoxanthin-C14:0					4.5 ± 1.3	4.6 ± 0.1	10.1 ± 0.4		
Phoenicoxanthin-C16:0					2.0 ± 0.5	2.0 ± 0.1	4.2 ± 0.1		
Adonixanthin-C14:1					5.3 ± 0.5	2.7 ± 0.2	4.5 ± 0.3		
Adonixanthin-C16:1					2.0 ± 0.3	1.9 ± 0.1	2.5 ± 0.2		
Unknown keto-1								10.8 ± 1.1	2.8 ± 0.3
Total ketocarotenoids					35.6 ± 5.6	40.1 ± 1.3	59.8 ± 0.9	143.6 ± 16.5	42.0 ± 0.2
TOTAL	0.5 ± 0.0	0.2 ± 0.0	22.2 ± 0.7	31.0 ± 1.5	47.2 ± 5.9	52.9 ± 1.6	103.5 ± 2.4	154.0 ± 17.5	68.2 ± 0.5
N	6	5	6	5	6	5	5	6	5

The feeds (basic, control tomato, ZWRI tomato, ZWRI extract and commercial) were analysed at the end of each trial (50 and 80 days for the fresh and brackish water experiments, respectively). Data are shown as µg/g dry weight. N represents the number of feed batch analysed. They were studied in three technical replicates each. Keto, ketocarotenoid.

Table S5. Carotenoid content in trout fillet from the fresh and brackish water experiments

	Basic feed			Control tomato feed			ZWRI tomato feed			ZWRI extract feed		Commercial feed		
	Fresh	Brackish		Fresh	Brackish		Fresh	Brackish		Brackish		Fresh	Brackish	
Carotenoid (µg/g DW)	50d	60d	80d	50d	60d	80d	50d	60d	80d	60d	80d	50d	60d	80d
Lutein	0.4 ± 0.3	0.1 ± 0.0	0.0 ± 0.0	0.9 ± 0.5	0.1 ± 0.0	0.1 ± 0.1	0.5 ± 0.3	nq	nq	nq	nq	0.7 ± 0.3	nq	nq
Echinenone							0.1 ± 0.0	nq	nq	nq	nq			
3′-OH-Echinenone							0.2 ± 0.1	0.2 ± 0.1	0.4 ± 0.2	0.4 ± 0.2	0.3 ± 0.1			
Canthaxanthin							3.9 ± 1.9	2.2 ± 1.0	4.2 ± 2.8	3.9 ± 2.2	3.4 ± 1.1			
Phoenicoxanthin							7.1 ± 4.0	0.5 ± 0.6	2.4 ± 2.8	2.6 ± 2.5	2.4 ± 1.3			
Astaxanthin							2.9 ± 1.5	0.8 ± 0.4	0.8 ± 0.5	0.8 ± 0.3	0.7 ± 0.2	35.5 ± 11.5	7.8 ± 3.0	6.4 ± 3.4
Unknown keto-1												0.8 ± 0.3	0.7 ± 0.3	0.4 ± 0.2
Total ketocarotenoids							14.2 ± 7.4	3.8 ± 2.1	7.8 ± 6.2	7.7 ± 5.2	6.8 ± 2.6	36.3 ± 11.7	8.5 ± 3.3	6.9 ± 3.6
TOTAL	0.4 ± 0.3	0.1 ± 0.0	0.0 ± 0.0	0.9 ± 0.5	0.1 ± 0.0	0.1 ± 0.1	14.7 ± 7.7	3.8 ± 2.1	7.8 ± 6.2	7.8 ± 5.3	6.9 ± 2.7	37.0 ± 11.9	8.5 ± 3.3	6.9 ± 3.6
N	15	10	5	15	10	5	15	10	5	10	5	15	10	5

The trout fillet from the trout (50 day old and 60 or 80 day old for the fresh and brackish water trials, respectively) fed with the basic, control tomato, ZWRI tomato, ZWRI extract and commercial feed treatments were analysed. Data are shown as µg/g dry weight. N represents the number of trout fillet analysed. They were studied in three technical replicates each. Keto, ketocarotenoid.

Table S6. Carotenoid content in trout liver, eye and feces

	Liver				Eye				Feces			
Carotenoid (μg/g DW)	Basic	Control tomato	ZWRI tomato	Commercial	Basic	Control tomato	ZWRI tomato	Commercial	Basic	Control tomato	ZWRI tomato	Commercial
Lycopene		3.0 ± 0.3 **20**	2.7 ± 0.2							19.8 ± 1.6 **130**		
β-Carotene		2.5 ± 0.1 **43**	3.3 ± 0.2 **29**							14.1 ± 0.4 **245**	21.7 ± 0.9 **192**	
Lutein									0.7 ± 0.1 **135**	0.9 ± 0.2 **80**	1.1 ± 0.1 **315**	9.2 ± 0.3 **88**
Echinenone			0.7 ± 0.1 **30**								5.2 ± 0.2 **221**	
3-OH-Echinenone											4.0 ± 0.2 **405**	
3'-OH-Echinenone			0.7 ± 0.0 **35**								6.2 ± 0.2 **312**	
Canthaxanthin			0.4 ± 0.1 **5**				0.2 ± 0.1 **3**				9.9 ± 0.7 **111**	
Phoenicoxanthin			0.1 ± 0.0 **1**				0.0 ± 0.0 **0**				14.4 ± 1.3 **255**	0.3 ± 0.0
Astaxanthin			0.4 ± 0.0 **19**	8.3 ± 1.3 **6**				2.7 ± 0.2 **2**			6.4 ± 1.0 **351**	223.1 ± 12.9 **168**
Phoenicoxanthin-C14:0											0.3 ± 0.1 **7**	
Phoenicoxanthin-C16:0											0.1 ± 0.0 **7**	
Adonixanthin-C14:1											3.0 ± 0.9 **57**	
Adonixanthin-C16:1											0.8 ± 0.2 **39**	
Unknown keto-1				1.8 ± 0.2 **17**				0.1 ± 0.0 **1**				12.9 ± 0.4 **119**
Total coloring keto.			0.9 ± 0.2 **4**	8.3 ± 1.3 **6**			0.3 ± 0.1 **1**	2.7 ± 0.2 **2**			31.1 ± 2.0 **136**	223.4 ± 12.9 **168**
Total keto.			2.3 ± 0.2 **6**	10.1 ± 1.5 **7**			0.3 ± 0.1 **1**	2.8 ± 0.2 **2**			50.3 ± 2.6 **141**	236.3 ± 13.2 **164**
TOTAL		5.5 ± 0.4 **25**	8.3 ± 0.5 **18**	10.1 ± 1.5 **7**			0.3 ± 0.1 **1**	2.8 ± 0.2 **2**	0.7 ± 0.1 **135**	34.9 ± 2.0 **157**	73.1 ± 3.1 **155**	245.4 ± 13.3 **159**
N	3	3	3	3	3	3	3	3	3	3	3	3

Data are presented for the trout from the fresh water trial. Carotenoid content is displayed as μg/g dry weight. The retention is expressed in bold and as a percentage. Retention was calculated by divided the quantity of a ketocarotenoid in the liver, eye or feces by its content in the feed and multiplying by a hundred. Livers, eyes and feces were pooled per tank (from 10 trout). *N* represents the number of tank analysed. An absence of figure means that the carotenoid was detected in the samples analysed. Keto., ketocarotenoids.

Table S7. Details of statistical analysis performed in SPSS software

Display	Analysis of	Dependent variable	comparison			Statistical analysis		p-value	stars
Table S1	Carotenoids in tomato	Phytoene	Greenhouse	compared to	Early polytunnel	One way ANOVA	Games-Howell	.962	
Table S1	Carotenoids in tomato	Phytoene	Greenhouse	compared to	Late polytunnel	One way ANOVA	Games-Howell	.000	***
Table S1	Carotenoids in tomato	Phytoene	Early polytunnel	compared to	Late polytunnel	One way ANOVA	Games-Howell	.000	***
Table S1	Carotenoids in tomato	Phytofluene	Greenhouse	compared to	Early polytunnel	One way ANOVA	Tukey	.000	***
Table S1	Carotenoids in tomato	Phytofluene	Greenhouse	compared to	Late polytunnel	One way ANOVA	Tukey	.000	***
Table S1	Carotenoids in tomato	Phytofluene	Early polytunnel	compared to	Late polytunnel	One way ANOVA	Tukey	.000	***
Table S1	Carotenoids in tomato	b-carotene	Greenhouse	compared to	Early polytunnel	One way ANOVA	Games-Howell	.000	***
Table S1	Carotenoids in tomato	b-carotene	Greenhouse	compared to	Late polytunnel	One way ANOVA	Games-Howell	.000	***
Table S1	Carotenoids in tomato	b-carotene	Early polytunnel	compared to	Late polytunnel	One way ANOVA	Games-Howell	.000	***
Table S1	Carotenoids in tomato	Echinenone	Greenhouse	compared to	Early polytunnel	One way ANOVA	Tukey	.000	***
Table S1	Carotenoids in tomato	Echinenone	Greenhouse	compared to	Late polytunnel	One way ANOVA	Tukey	.000	***
Table S1	Carotenoids in tomato	Echinenone	Early polytunnel	compared to	Late polytunnel	One way ANOVA	Tukey	.000	***
Table S1	Carotenoids in tomato	3-OH-Echinenone	Greenhouse	compared to	Early polytunnel	One way ANOVA	Games-Howell	.280	

Table S1	Carotenoids in tomato	3-OH-Echinenone	Greenhouse	compared to	Late polytunnel	One way ANOVA	Games-Howell	.000	***
Table S1	Carotenoids in tomato	3-OH-Echinenone	Early polytunnel	compared to	Late polytunnel	One way ANOVA	Games-Howell	.000	***
Table S1	Carotenoids in tomato	3´-OH-Echinenone	Greenhouse	compared to	Early polytunnel	One way ANOVA	Games-Howell	.446	
Table S1	Carotenoids in tomato	3´-OH-Echinenone	Greenhouse	compared to	Late polytunnel	One way ANOVA	Games-Howell	.003	**
Table S1	Carotenoids in tomato	3´-OH-Echinenone	Early polytunnel	compared to	Late polytunnel	One way ANOVA	Games-Howell	.879	
Table S1	Carotenoids in tomato	Canthaxanthin	Greenhouse	compared to	Early polytunnel	One way ANOVA	Tukey	.885	
Table S1	Carotenoids in tomato	Canthaxanthin	Greenhouse	compared to	Late polytunnel	One way ANOVA	Tukey	.000	***
Table S1	Carotenoids in tomato	Canthaxanthin	Early polytunnel	compared to	Late polytunnel	One way ANOVA	Tukey	.001	***
Table S1	Carotenoids in tomato	Phoenicoxanthin	Greenhouse	compared to	Early polytunnel	One way ANOVA	Games-Howell	.042	*
Table S1	Carotenoids in tomato	Phoenicoxanthin	Greenhouse	compared to	Late polytunnel	One way ANOVA	Games-Howell	.000	***
Table S1	Carotenoids in tomato	Phoenicoxanthin	Early polytunnel	compared to	Late polytunnel	One way ANOVA	Games-Howell	.000	***
Table S1	Carotenoids in tomato	Astaxanthin	Greenhouse	compared to	Early polytunnel	One way ANOVA	Games-Howell	.816	
Table S1	Carotenoids in tomato	Astaxanthin	Greenhouse	compared to	Late polytunnel	One way ANOVA	Games-Howell	.000	***
Table S1	Carotenoids in tomato	Astaxanthin	Early polytunnel	compared to	Late polytunnel	One way ANOVA	Games-Howell	.000	***
Table S1	Carotenoids in tomato	Phoenicoxanthin-C14:0	Greenhouse	compared to	Early polytunnel	One way ANOVA	Games-Howell	.000	***
Table S1	Carotenoids in tomato	Phoenicoxanthin-C14:0	Greenhouse	compared to	Late polytunnel	One way ANOVA	Games-Howell	.000	***

Table S1	Carotenoids in tomato	Phoenicoxanthin-C14:0	Early polytunnel	compared to	Late polytunnel	One way ANOVA	Games-Howell	.000	***
Table S1	Carotenoids in tomato	Phoenicoxanthin-C16:0	Greenhouse	compared to	Early polytunnel	One way ANOVA	Games-Howell	.000	***
Table S1	Carotenoids in tomato	Phoenicoxanthin-C16:0	Greenhouse	compared to	Late polytunnel	One way ANOVA	Games-Howell	.017	*
Table S1	Carotenoids in tomato	Phoenicoxanthin-C16:0	Early polytunnel	compared to	Late polytunnel	One way ANOVA	Games-Howell	.376	
Table S1	Carotenoids in tomato	Adonixanthin-C14:1	Greenhouse	compared to	Early polytunnel	One way ANOVA	Games-Howell	.038	*
Table S1	Carotenoids in tomato	Adonixanthin-C14:1	Greenhouse	compared to	Late polytunnel	One way ANOVA	Games-Howell	.000	***
Table S1	Carotenoids in tomato	Adonixanthin-C14:1	Early polytunnel	compared to	Late polytunnel	One way ANOVA	Games-Howell	.009	**
Table S1	Carotenoids in tomato	Adonixanthin-C16:1	Greenhouse	compared to	Early polytunnel	One way ANOVA	Games-Howell	.542	
Table S1	Carotenoids in tomato	Adonixanthin-C16:1	Greenhouse	compared to	Late polytunnel	One way ANOVA	Games-Howell	.070	
Table S1	Carotenoids in tomato	Adonixanthin-C16:1	Early polytunnel	compared to	Late polytunnel	One way ANOVA	Games-Howell	.533	
Table S1	Carotenoids in tomato	Total ketocarotenoids	Greenhouse	compared to	Early polytunnel	One way ANOVA	Games-Howell	.001	***
Table S1	Carotenoids in tomato	Total ketocarotenoids	Greenhouse	compared to	Late polytunnel	One way ANOVA	Games-Howell	.000	***
Table S1	Carotenoids in tomato	Total ketocarotenoids	Early polytunnel	compared to	Late polytunnel	One way ANOVA	Games-Howell	.000	***
Table S1	Carotenoids in tomato	Total	Greenhouse	compared to	Early polytunnel	One way ANOVA	Games-Howell	.013	*
Table S1	Carotenoids in tomato	Total	Greenhouse	compared to	Late polytunnel	One way ANOVA	Games-Howell	.000	***
Table S1	Carotenoids in tomato	Total	Early polytunnel	compared to	Late polytunnel	One way ANOVA	Games-Howell	.000	***

Fig. S2	Fatty acids in tomato (mg/g DW)	C16:0	ZWØRIØ	compared to	ZWØRI	One way ANOVA	Tukey	.869	
Fig. S2	Fatty acids in tomato (mg/g DW)	C16:0	ZWØRIØ	compared to	ZWRI	One way ANOVA	Tukey	.540	
Fig. S2	Fatty acids in tomato (mg/g DW)	C16:0	ZWØRI	compared to	ZWRI	One way ANOVA	Tukey	.306	
Fig. S2	Fatty acids in tomato (mg/g DW)	C16:1	ZWØRIØ	compared to	ZWØRI	One way ANOVA	Tukey	.437	
Fig. S2	Fatty acids in tomato (mg/g DW)	C16:1	ZWØRIØ	compared to	ZWRI	One way ANOVA	Tukey	.000	***
Fig. S2	Fatty acids in tomato (mg/g DW)	C16:1	ZWØRI	compared to	ZWRI	One way ANOVA	Tukey	.000	***
Fig. S2	Fatty acids in tomato (mg/g DW)	C18:0	ZWØRIØ	compared to	ZWØRI	One way ANOVA	Tukey	.010	*
Fig. S2	Fatty acids in tomato (mg/g DW)	C18:0	ZWØRIØ	compared to	ZWRI	One way ANOVA	Tukey	.002	**
Fig. S2	Fatty acids in tomato (mg/g DW)	C18:0	ZWØRI	compared to	ZWRI	One way ANOVA	Tukey	.330	
Fig. S2	Fatty acids in tomato (mg/g DW)	C18:1	ZWØRIØ	compared to	ZWØRI	One way ANOVA	Tukey	.000	***
Fig. S2	Fatty acids in tomato (mg/g DW)	C18:1	ZWØRIØ	compared to	ZWRI	One way ANOVA	Tukey	.001	***
Fig. S2	Fatty acids in tomato (mg/g DW)	C18:1	ZWØRI	compared to	ZWRI	One way ANOVA	Tukey	.942	
Fig. S2	Fatty acids in tomato (mg/g DW)	C18:2	ZWØRIØ	compared to	ZWØRI	One way ANOVA	Tukey	.609	
Fig. S2	Fatty acids in tomato (mg/g DW)	C18:2	ZWØRIØ	compared to	ZWRI	One way ANOVA	Tukey	.049	*
Fig. S2	Fatty acids in tomato (mg/g DW)	C18:2	ZWØRI	compared to	ZWRI	One way ANOVA	Tukey	.172	
Fig. S2	Fatty acids in tomato (mg/g DW)	C18:3	ZWØRIØ	compared to	ZWØRI	One way ANOVA	Tukey	.337	

Fig. S2	Fatty acids in tomato (mg/g DW)	C18:3	ZWØRIØ	compared to	ZWRI	One way ANOVA	Tukey	.005	**
Fig. S2	Fatty acids in tomato (mg/g DW)	C18:3	ZWØRI	compared to	ZWRI	One way ANOVA	Tukey	.024	*
Fig. S2	Fatty acids in tomato (mg/g DW)	Total fatty acids	ZWØRIØ	compared to	ZWØRI	One way ANOVA	Tukey	.216	
Fig. S2	Fatty acids in tomato (mg/g DW)	Total fatty acids	ZWØRIØ	compared to	ZWRI	One way ANOVA	Tukey	.248	
Fig. S2	Fatty acids in tomato (mg/g DW)	Total fatty acids	ZWØRI	compared to	ZWRI	One way ANOVA	Tukey	.993	
Fig. S5	Trout final weight (fresh water trial)	trout weight	BioMar trout	compared to	Basic trout	One way ANOVA	Games-Howell	.958	
Fig. S5	Trout final weight (fresh water trial)	trout weight	BioMar trout	compared to	Control tomato trout	One way ANOVA	Games-Howell	.637	
Fig. S5	Trout final weight (fresh water trial)	trout weight	BioMar trout	compared to	ZWRI tomato trout	One way ANOVA	Games-Howell	.371	
Fig. S5	Trout final weight (fresh water trial)	trout weight	Basic trout	compared to	Control tomato trout	One way ANOVA	Games-Howell	.948	
Fig. S5	Trout final weight (fresh water trial)	trout weight	Basic trout	compared to	ZWRI tomato trout	One way ANOVA	Games-Howell	.823	
Fig. S5	Trout final weight (fresh water trial)	trout weight	ZWRI tomato trout	compared to	Control tomato trout	One way ANOVA	Games-Howell	1.000	
Fig. S5	Trout final weight 60d (brackish water trial)	trout weight	Carophyll pink trout	compared to	Basic trout	One way ANOVA	Tukey	1.000	
Fig. S5	Trout final weight 60d (brackish water trial)	trout weight	Carophyll pink trout	compared to	Control tomato trout	One way ANOVA	Tukey	.099	

Fig. S5	Trout final weight 60d (brackish water trial)	trout weight	Carophyll pink trout	compared to	ZWRI tomato trout	One way ANOVA	Tukey	.342
Fig. S5	Trout final weight 60d (brackish water trial)	trout weight	Carophyll pink trout	compared to	ZWRI extract trout	One way ANOVA	Tukey	.918
Fig. S5	Trout final weight 60d (brackish water trial)	trout weight	Basic trout	compared to	Control tomato trout	One way ANOVA	Tukey	.150
Fig. S5	Trout final weight 60d (brackish water trial)	trout weight	Basic trout	compared to	ZWRI tomato trout	One way ANOVA	Tukey	.451
Fig. S5	Trout final weight 60d (brackish water trial)	trout weight	Basic trout	compared to	ZWRI extract trout	One way ANOVA	Tukey	.966
Fig. S5	Trout final weight 60d (brackish water trial)	trout weight	ZWRI tomato trout	compared to	Control tomato trout	One way ANOVA	Tukey	.966
Fig. S5	Trout final weight 60d (brackish water trial)	trout weight	ZWRI tomato trout	compared to	ZWRI extract trout	One way ANOVA	Tukey	.827
Fig. S5	Trout final weight 60d (brackish water trial)	trout weight	Control tomato trout	compared to	ZWRI extract trout	One way ANOVA	Tukey	.433
Fig. S5	Trout final weight 80d (brackish water trial)	trout weight	Carophyll pink trout	compared to	Basic trout	One way ANOVA	Tukey	.994
Fig. S5	Trout final weight 80d (brackish water trial)	trout weight	Carophyll pink trout	compared to	Control tomato trout	One way ANOVA	Tukey	.224
Fig. S5	Trout final weight 80d (brackish water trial)	trout weight	Carophyll pink trout	compared to	ZWRI tomato trout	One way ANOVA	Tukey	.995

Fig. S5	Trout final weight 80d (brackish water trial)	trout weight	Carophyll pink trout	compared to	ZWRI extract trout	One way ANOVA	Tukey	.999
Fig. S5	Trout final weight 80d (brackish water trial)	trout weight	Basic trout	compared to	Control tomato trout	One way ANOVA	Tukey	.111
Fig. S5	Trout final weight 80d (brackish water trial)	trout weight	Basic trout	compared to	ZWRI tomato trout	One way ANOVA	Tukey	.937
Fig. S5	Trout final weight 80d (brackish water trial)	trout weight	Basic trout	compared to	ZWRI extract trout	One way ANOVA	Tukey	1.000
Fig. S5	Trout final weight 80d (brackish water trial)	trout weight	ZWRI tomato trout	compared to	Control tomato trout	One way ANOVA	Tukey	.469
Fig. S5	Trout final weight 80d (brackish water trial)	trout weight	ZWRI tomato trout	compared to	ZWRI extract trout	One way ANOVA	Tukey	.966
Fig. S5	Trout final weight 80d (brackish water trial)	trout weight	Control tomato trout	compared to	ZWRI extract trout	One way ANOVA	Tukey	.142
Fig. S6	Cholesterol in trout fillet	Cholesterol	BioMar fillet	compared to	Basic fillet	One way ANOVA	Tukey	.521
Fig. S6	Cholesterol in trout fillet	Cholesterol	BioMar fillet	compared to	ZWRI tomato fillet	One way ANOVA	Tukey	.977
Fig. S6	Cholesterol in trout fillet	Cholesterol	BioMar fillet	compared to	Control tomato fillet	One way ANOVA	Tukey	.780
Fig. S6	Cholesterol in trout fillet	Cholesterol	Basic fillet	compared to	ZWRI tomato fillet	One way ANOVA	Tukey	.276

Fig. S6	Cholesterol in trout fillet	Cholesterol	Basic fillet	compared to	Control tomato fillet	One way ANOVA	Tukey	.079	
Fig. S6	Cholesterol in trout fillet	Cholesterol	ZWRI tomato fillet	compared to	Control tomato fillet	One way ANOVA	Tukey	.953	
Fig. S6	Cholesterol in trout liver	Cholesterol	BioMar liver	compared to	Basic liver	One way ANOVA	Games-Howell	.469	
Fig. S6	Cholesterol in trout liver	Cholesterol	BioMar liver	compared to	ZWRI tomato liver	One way ANOVA	Games-Howell	.803	
Fig. S6	Cholesterol in trout liver	Cholesterol	BioMar liver	compared to	Control tomato liver	One way ANOVA	Games-Howell	.614	
Fig. S6	Cholesterol in trout liver	Cholesterol	Basic liver	compared to	ZWRI tomato liver	One way ANOVA	Games-Howell	.834	
Fig. S6	Cholesterol in trout liver	Cholesterol	Basic liver	compared to	Control tomato liver	One way ANOVA	Games-Howell	.903	
Fig. S6	Cholesterol in trout liver	Cholesterol	ZWRI tomato liver	compared to	Control tomato liver	One way ANOVA	Games-Howell	.982	
Fig. S7	Retinoids in trout liver	Retinyl acetate	BioMar liver	compared to	Basic liver	One way ANOVA	Games-Howell	.001	***
Fig. S7	Retinoids in trout liver	Retinyl acetate	BioMar liver	compared to	ZWRI tomato liver	One way ANOVA	Games-Howell	.401	
Fig. S7	Retinoids in trout liver	Retinyl acetate	BioMar liver	compared to	Control tomato liver	One way ANOVA	Games-Howell	.002	**

Fig. S7	Retinoids in trout liver	Retinyl acetate	Basic liver	compared to	ZWRI tomato liver	One way ANOVA	Games-Howell	.038	*
Fig. S7	Retinoids in trout liver	Retinyl acetate	Basic liver	compared to	Control tomato liver	One way ANOVA	Games-Howell	.254	
Fig. S7	Retinoids in trout liver	Retinyl acetate	ZWRI tomato liver	compared to	Control tomato liver	One way ANOVA	Games-Howell	.142	
Fig. S7	Retinoids in trout liver	b-apo-14-carotenal	BioMar liver	compared to	Basic liver	One way ANOVA	Games-Howell	.001	***
Fig. S7	Retinoids in trout liver	b-apo-14-carotenal	BioMar liver	compared to	ZWRI tomato liver	One way ANOVA	Games-Howell	.897	
Fig. S7	Retinoids in trout liver	b-apo-14-carotenal	BioMar liver	compared to	Control tomato liver	One way ANOVA	Games-Howell	.005	**
Fig. S7	Retinoids in trout liver	b-apo-14-carotenal	Basic liver	compared to	ZWRI tomato liver	One way ANOVA	Games-Howell	.026	*
Fig. S7	Retinoids in trout liver	b-apo-14-carotenal	Basic liver	compared to	Control tomato liver	One way ANOVA	Games-Howell	.056	
Fig. S7	Retinoids in trout liver	b-apo-14-carotenal	ZWRI tomato liver	compared to	Control tomato liver	One way ANOVA	Games-Howell	.067	
Fig. S8	Fatty acids in feed and trout fillets (mg/g DW)	C14:0	BioMar fillet	compared to	BioMar feed	Independent t-test	Equal variances assumed	.103	
Fig. S8	Fatty acids in feed and trout fillets (mg/g DW)	C16:0	BioMar fillet	compared to	BioMar feed	Independent t-test	Equal variances assumed	.000	***

Fig. S8	Fatty acids in feed and trout fillets (mg/g DW)	C16:1	BioMar fillet	compared to	BioMar feed	Independent t-test	Equal variances assumed	.000	***
Fig. S8	Fatty acids in feed and trout fillets (mg/g DW)	C18:0	BioMar fillet	compared to	BioMar feed	Independent t-test	Equal variances not assumed	.000	***
Fig. S8	Fatty acids in feed and trout fillets (mg/g DW)	C18:1	BioMar fillet	compared to	BioMar feed	Independent t-test	Equal variances not assumed	.031	*
Fig. S8	Fatty acids in feed and trout fillets (mg/g DW)	C18:2	BioMar fillet	compared to	BioMar feed	Independent t-test	Equal variances assumed	.001	**
Fig. S8	Fatty acids in feed and trout fillets (mg/g DW)	C18:3	BioMar fillet	compared to	BioMar feed	Independent t-test	Equal variances not assumed	.420	
Fig. S8	Fatty acids in feed and trout fillets (mg/g DW)	C20:1	BioMar fillet	compared to	BioMar feed	Independent t-test	Equal variances not assumed	.608	
Fig. S8	Fatty acids in feed and trout fillets (mg/g DW)	C20:5	BioMar fillet	compared to	BioMar feed	Independent t-test	Equal variances assumed	.644	
Fig. S8	Fatty acids in feed and trout fillets (mg/g DW)	C22:6	BioMar fillet	compared to	BioMar feed	Independent t-test	Equal variances not assumed	.000	***
Fig. S8	Fatty acids in feed and trout fillets (mg/g DW)	Total fatty acids	BioMar fillet	compared to	BioMar feed	Independent t-test	Equal variances assumed	.145	
Fig. S8	Fatty acids in feed and trout fillets (mg/g DW)	C14:0	Basic fillet	compared to	Basic feed	Independent t-test	Equal variances not assumed	.958	

Fig. S8	Fatty acids in feed and trout fillets (mg/g DW)	C16:0	Basic fillet	compared to	Basic feed	Independent t-test	Equal variances assumed	.000	***
Fig. S8	Fatty acids in feed and trout fillets (mg/g DW)	C16:1	Basic fillet	compared to	Basic feed	Independent t-test	Equal variances not assumed	.000	***
Fig. S8	Fatty acids in feed and trout fillets (mg/g DW)	C18:0	Basic fillet	compared to	Basic feed	Independent t-test	Equal variances assumed	.000	***
Fig. S8	Fatty acids in feed and trout fillets (mg/g DW)	C18:1	Basic fillet	compared to	Basic feed	Independent t-test	Equal variances not assumed	.143	
Fig. S8	Fatty acids in feed and trout fillets (mg/g DW)	C18:2	Basic fillet	compared to	Basic feed	Independent t-test	Equal variances not assumed	.002	**
Fig. S8	Fatty acids in feed and trout fillets (mg/g DW)	C18:3	Basic fillet	compared to	Basic feed	Independent t-test	Equal variances not assumed	.672	
Fig. S8	Fatty acids in feed and trout fillets (mg/g DW)	C20:1	Basic fillet	compared to	Basic feed	Independent t-test	Equal variances assumed	.853	
Fig. S8	Fatty acids in feed and trout fillets (mg/g DW)	C20:5	Basic fillet	compared to	Basic feed	Independent t-test	Equal variances assumed	.270	
Fig. S8	Fatty acids in feed and trout fillets (mg/g DW)	C22:6	Basic fillet	compared to	Basic feed	Independent t-test	Equal variances not assumed	.000	***
Fig. S8	Fatty acids in feed and trout fillets (mg/g DW)	Total fatty acids	Basic fillet	compared to	Basic feed	Independent t-test	Equal variances not assumed	.994	

Fig. S8	Fatty acids in feed and trout fillets (mg/g DW)	C14:0	Control tomato fillet	compared to	Control tomato feed	Independent t-test	Equal variances assumed	.004	**
Fig. S8	Fatty acids in feed and trout fillets (mg/g DW)	C16:0	Control tomato fillet	compared to	Control tomato feed	Independent t-test	Equal variances assumed	.000	***
Fig. S8	Fatty acids in feed and trout fillets (mg/g DW)	C16:1	Control tomato fillet	compared to	Control tomato feed	Independent t-test	Equal variances not assumed	.000	***
Fig. S8	Fatty acids in feed and trout fillets (mg/g DW)	C18:0	Control tomato fillet	compared to	Control tomato feed	Independent t-test	Equal variances not assumed	.000	***
Fig. S8	Fatty acids in feed and trout fillets (mg/g DW)	C18:1	Control tomato fillet	compared to	Control tomato feed	Independent t-test	Equal variances assumed	.000	***
Fig. S8	Fatty acids in feed and trout fillets (mg/g DW)	C18:2	Control tomato fillet	compared to	Control tomato feed	Independent t-test	Equal variances assumed	.517	
Fig. S8	Fatty acids in feed and trout fillets (mg/g DW)	C18:3	Control tomato fillet	compared to	Control tomato feed	Independent t-test	Equal variances assumed	.000	***
Fig. S8	Fatty acids in feed and trout fillets (mg/g DW)	C20:1	Control tomato fillet	compared to	Control tomato feed	Independent t-test	Equal variances assumed	.009	**
Fig. S8	Fatty acids in feed and trout fillets (mg/g DW)	C20:5	Control tomato fillet	compared to	Control tomato feed	Independent t-test	Equal variances assumed	.289	
Fig. S8	Fatty acids in feed and trout fillets (mg/g DW)	C22:6	Control tomato fillet	compared to	Control tomato feed	Independent t-test	Equal variances assumed	.000	***

Fig. S8	Fatty acids in feed and trout fillets (mg/g DW)	Total fatty acids	Control tomato fillet	compared to	Control tomato feed	Independent t-test	Equal variances assumed	.001	***
Fig. S8	Fatty acids in feed and trout fillets (mg/g DW)	C14:0	ZWRI tomato fillet	compared to	ZWRI tomato feed	Independent t-test	Equal variances assumed	.333	
Fig. S8	Fatty acids in feed and trout fillets (mg/g DW)	C16:0	ZWRI tomato fillet	compared to	ZWRI tomato feed	Independent t-test	Equal variances assumed	.005	**
Fig. S8	Fatty acids in feed and trout fillets (mg/g DW)	C16:1	ZWRI tomato fillet	compared to	ZWRI tomato feed	Independent t-test	Equal variances assumed	.000	***
Fig. S8	Fatty acids in feed and trout fillets (mg/g DW)	C18:0	ZWRI tomato fillet	compared to	ZWRI tomato feed	Independent t-test	Equal variances assumed	.000	***
Fig. S8	Fatty acids in feed and trout fillets (mg/g DW)	C18:1	ZWRI tomato fillet	compared to	ZWRI tomato feed	Independent t-test	Equal variances assumed	.051	
Fig. S8	Fatty acids in feed and trout fillets (mg/g DW)	C18:2	ZWRI tomato fillet	compared to	ZWRI tomato feed	Independent t-test	Equal variances assumed	.000	***
Fig. S8	Fatty acids in feed and trout fillets (mg/g DW)	C18:3	ZWRI tomato fillet	compared to	ZWRI tomato feed	Independent t-test	Equal variances not assumed	.000	***
Fig. S8	Fatty acids in feed and trout fillets (mg/g DW)	C20:1	ZWRI tomato fillet	compared to	ZWRI tomato feed	Independent t-test	Equal variances assumed	.249	
Fig. S8	Fatty acids in feed and trout fillets (mg/g DW)	C20:5	ZWRI tomato fillet	compared to	ZWRI tomato feed	Independent t-test	Equal variances not assumed	.249	

Fig. S8	Fatty acids in feed and trout fillets (mg/g DW)	C22:6	ZWRI tomato fillet	compared to	ZWRI tomato feed	Independent t-test	Equal variances not assumed	.000	***
Fig. S8	Fatty acids in feed and trout fillets (mg/g DW)	Total fatty acids	ZWRI tomato fillet	compared to	ZWRI tomato feed	Independent t-test	Equal variances assumed	.552	
Fig. S8	Fatty acids in feed and trout fillets (%)	C14:0	BioMar fillet	compared to	BioMar feed	Independent t-test	Equal variances assumed	.002	**
Fig. S8	Fatty acids in feed and trout fillets (%)	C16:0	BioMar fillet	compared to	BioMar feed	Independent t-test	Equal variances not assumed	.000	***
Fig. S8	Fatty acids in feed and trout fillets (%)	C16:1	BioMar fillet	compared to	BioMar feed	Independent t-test	Equal variances not assumed	.001	***
Fig. S8	Fatty acids in feed and trout fillets (%)	C18:0	BioMar fillet	compared to	BioMar feed	Independent t-test	Equal variances not assumed	.000	***
Fig. S8	Fatty acids in feed and trout fillets (%)	C18:1	BioMar fillet	compared to	BioMar feed	Independent t-test	Equal variances not assumed	.000	***
Fig. S8	Fatty acids in feed and trout fillets (%)	C18:2	BioMar fillet	compared to	BioMar feed	Independent t-test	Equal variances assumed	.000	***
Fig. S8	Fatty acids in feed and trout fillets (%)	C18:3	BioMar fillet	compared to	BioMar feed	Independent t-test	Equal variances assumed	.000	***
Fig. S8	Fatty acids in feed and trout fillets (%)	C20:1	BioMar fillet	compared to	BioMar feed	Independent t-test	Equal variances assumed	.005	**

Fig. S8	Fatty acids in feed and trout fillets (%)	C20:5	BioMar fillet	compared to	BioMar feed	Independent t-test	Equal variances assumed	.119	
Fig. S8	Fatty acids in feed and trout fillets (%)	C22:6	BioMar fillet	compared to	BioMar feed	Independent t-test	Equal variances assumed	.000	***
Fig. S8	Fatty acids in feed and trout fillets (%)	C14:0	Basic fillet	compared to	Basic feed	Independent t-test	Equal variances assumed	.008	**
Fig. S8	Fatty acids in feed and trout fillets (%)	C16:0	Basic fillet	compared to	Basic feed	Independent t-test	Equal variances assumed	.000	***
Fig. S8	Fatty acids in feed and trout fillets (%)	C16:1	Basic fillet	compared to	Basic feed	Independent t-test	Equal variances not assumed	.000	***
Fig. S8	Fatty acids in feed and trout fillets (%)	C18:0	Basic fillet	compared to	Basic feed	Independent t-test	Equal variances not assumed	.000	***
Fig. S8	Fatty acids in feed and trout fillets (%)	C18:1	Basic fillet	compared to	Basic feed	Independent t-test	Equal variances assumed	.000	***
Fig. S8	Fatty acids in feed and trout fillets (%)	C18:2	Basic fillet	compared to	Basic feed	Independent t-test	Equal variances assumed	.000	***
Fig. S8	Fatty acids in feed and trout fillets (%)	C18:3	Basic fillet	compared to	Basic feed	Independent t-test	Equal variances assumed	.000	***
Fig. S8	Fatty acids in feed and trout fillets (%)	C20:1	Basic fillet	compared to	Basic feed	Independent t-test	Equal variances assumed	.069	

Fig. S8	Fatty acids in feed and trout fillets (%)	C20:5	Basic fillet	compared to	Basic feed	Independent t-test	Equal variances assumed	.584	
Fig. S8	Fatty acids in feed and trout fillets (%)	C22:6	Basic fillet	compared to	Basic feed	Independent t-test	Equal variances assumed	.000	***
Fig. S8	Fatty acids in feed and trout fillets (%)	C14:0	Control tomato fillet	compared to	Control tomato feed	Independent t-test	Equal variances assumed	.276	
Fig. S8	Fatty acids in feed and trout fillets (%)	C16:0	Control tomato fillet	compared to	Control tomato feed	Independent t-test	Equal variances assumed	.000	***
Fig. S8	Fatty acids in feed and trout fillets (%)	C16:1	Control tomato fillet	compared to	Control tomato feed	Independent t-test	Equal variances assumed	.000	***
Fig. S8	Fatty acids in feed and trout fillets (%)	C18:0	Control tomato fillet	compared to	Control tomato feed	Independent t-test	Equal variances assumed	.000	***
Fig. S8	Fatty acids in feed and trout fillets (%)	C18:1	Control tomato fillet	compared to	Control tomato feed	Independent t-test	Equal variances assumed	.000	***
Fig. S8	Fatty acids in feed and trout fillets (%)	C18:2	Control tomato fillet	compared to	Control tomato feed	Independent t-test	Equal variances assumed	.000	***
Fig. S8	Fatty acids in feed and trout fillets (%)	C18:3	Control tomato fillet	compared to	Control tomato feed	Independent t-test	Equal variances assumed	.015	*
Fig. S8	Fatty acids in feed and trout fillets (%)	C20:1	Control tomato fillet	compared to	Control tomato feed	Independent t-test	Equal variances assumed	.280	

Fig. S8	Fatty acids in feed and trout fillets (%)	C20:5	Control tomato fillet	compared to	Control tomato feed	Independent t-test	Equal variances not assumed	.150	
Fig. S8	Fatty acids in feed and trout fillets (%)	C22:6	Control tomato fillet	compared to	Control tomato feed	Independent t-test	Equal variances assumed	.000	***
Fig. S8	Fatty acids in feed and trout fillets (%)	C14:0	ZWRI tomato fillet	compared to	ZWRI tomato feed	Independent t-test	Equal variances not assumed	.412	
Fig. S8	Fatty acids in feed and trout fillets (%)	C16:0	ZWRI tomato fillet	compared to	ZWRI tomato feed	Independent t-test	Equal variances assumed	.000	***
Fig. S8	Fatty acids in feed and trout fillets (%)	C16:1	ZWRI tomato fillet	compared to	ZWRI tomato feed	Independent t-test	Equal variances not assumed	.000	***
Fig. S8	Fatty acids in feed and trout fillets (%)	C18:0	ZWRI tomato fillet	compared to	ZWRI tomato feed	Independent t-test	Equal variances assumed	.000	***
Fig. S8	Fatty acids in feed and trout fillets (%)	C18:1	ZWRI tomato fillet	compared to	ZWRI tomato feed	Independent t-test	Equal variances assumed	.000	***
Fig. S8	Fatty acids in feed and trout fillets (%)	C18:2	ZWRI tomato fillet	compared to	ZWRI tomato feed	Independent t-test	Equal variances assumed	.000	***
Fig. S8	Fatty acids in feed and trout fillets (%)	C18:3	ZWRI tomato fillet	compared to	ZWRI tomato feed	Independent t-test	Equal variances not assumed	.000	***
Fig. S8	Fatty acids in feed and trout fillets (%)	C20:1	ZWRI tomato fillet	compared to	ZWRI tomato feed	Independent t-test	Equal variances assumed	.371	

Fig. S8	Fatty acids in feed and trout fillets (%)	C20:5	ZWRI tomato fillet	compared to	ZWRI tomato feed	Independent t-test	Equal variances not assumed	.000	***
Fig. S8	Fatty acids in feed and trout fillets (%)	C22:6	ZWRI tomato fillet	compared to	ZWRI tomato feed	Independent t-test	Equal variances assumed	.000	***
Fig. S8	Fatty acids in trout fillets (%)	C14:0	BioMar fillet	compared to	Basic fillet	One way ANOVA	Games-Howell	.000	***
Fig. S8	Fatty acids in trout fillets (%)	C14:0	BioMar fillet	compared to	Control tomato fillet	One way ANOVA	Games-Howell	.000	***
Fig. S8	Fatty acids in trout fillets (%)	C14:0	BioMar fillet	compared to	ZWRI tomato fillet	One way ANOVA	Games-Howell	.000	***
Fig. S8	Fatty acids in trout fillets (%)	C14:0	Basic fillet	compared to	Control tomato fillet	One way ANOVA	Games-Howell	.988	
Fig. S8	Fatty acids in trout fillets (%)	C14:0	Basic fillet	compared to	ZWRI tomato fillet	One way ANOVA	Games-Howell	.904	
Fig. S8	Fatty acids in trout fillets (%)	C14:0	ZWRI tomato fillet	compared to	Control tomato fillet	One way ANOVA	Games-Howell	.991	
Fig. S8	Fatty acids in trout fillets (%)	C16:0	BioMar fillet	compared to	Basic fillet	One way ANOVA	Games-Howell	.000	***
Fig. S8	Fatty acids in trout fillets (%)	C16:0	BioMar fillet	compared to	Control tomato fillet	One way ANOVA	Games-Howell	.000	***
Fig. S8	Fatty acids in trout fillets (%)	C16:0	BioMar fillet	compared to	ZWRI tomato fillet	One way ANOVA	Games-Howell	.000	***

Fig. S8	Fatty acids in trout fillets (%)	C16:0	Basic fillet	compared to	Control tomato fillet	One way ANOVA	Games-Howell	.344	
Fig. S8	Fatty acids in trout fillets (%)	C16:0	Basic fillet	compared to	ZWRI tomato fillet	One way ANOVA	Games-Howell	.012	*
Fig. S8	Fatty acids in trout fillets (%)	C16:0	ZWRI tomato fillet	compared to	Control tomato fillet	One way ANOVA	Games-Howell	.144	
Fig. S8	Fatty acids in trout fillets (%)	C16:1	BioMar fillet	compared to	Basic fillet	One way ANOVA	Games-Howell	.485	
Fig. S8	Fatty acids in trout fillets (%)	C16:1	BioMar fillet	compared to	Control tomato fillet	One way ANOVA	Games-Howell	.001	***
Fig. S8	Fatty acids in trout fillets (%)	C16:1	BioMar fillet	compared to	ZWRI tomato fillet	One way ANOVA	Games-Howell	.642	
Fig. S8	Fatty acids in trout fillets (%)	C16:1	Basic fillet	compared to	Control tomato fillet	One way ANOVA	Games-Howell	.204	
Fig. S8	Fatty acids in trout fillets (%)	C16:1	Basic fillet	compared to	ZWRI tomato fillet	One way ANOVA	Games-Howell	.992	
Fig. S8	Fatty acids in trout fillets (%)	C16:1	ZWRI tomato fillet	compared to	Control tomato fillet	One way ANOVA	Games-Howell	.083	
Fig. S8	Fatty acids in trout fillets (%)	C18:0	BioMar fillet	compared to	Basic fillet	One way ANOVA	Tukey	.000	***
Fig. S8	Fatty acids in trout fillets (%)	C18:0	BioMar fillet	compared to	Control tomato fillet	One way ANOVA	Tukey	.000	***

Fig. S8	Fatty acids in trout fillets (%)	C18:0	BioMar fillet	compared to	ZWRI tomato fillet	One way ANOVA	Tukey	.000	***
Fig. S8	Fatty acids in trout fillets (%)	C18:0	Basic fillet	compared to	Control tomato fillet	One way ANOVA	Tukey	.227	
Fig. S8	Fatty acids in trout fillets (%)	C18:0	Basic fillet	compared to	ZWRI tomato fillet	One way ANOVA	Tukey	1.000	
Fig. S8	Fatty acids in trout fillets (%)	C18:0	ZWRI tomato fillet	compared to	Control tomato fillet	One way ANOVA	Tukey	.242	
Fig. S8	Fatty acids in trout fillets (%)	C18:1	BioMar fillet	compared to	Basic fillet	One way ANOVA	Games-Howell	.000	***
Fig. S8	Fatty acids in trout fillets (%)	C18:1	BioMar fillet	compared to	Control tomato fillet	One way ANOVA	Games-Howell	.000	***
Fig. S8	Fatty acids in trout fillets (%)	C18:1	BioMar fillet	compared to	ZWRI tomato fillet	One way ANOVA	Games-Howell	.000	***
Fig. S8	Fatty acids in trout fillets (%)	C18:1	Basic fillet	compared to	Control tomato fillet	One way ANOVA	Games-Howell	.949	
Fig. S8	Fatty acids in trout fillets (%)	C18:1	Basic fillet	compared to	ZWRI tomato fillet	One way ANOVA	Games-Howell	.001	***
Fig. S8	Fatty acids in trout fillets (%)	C18:1	ZWRI tomato fillet	compared to	Control tomato fillet	One way ANOVA	Games-Howell	.000	***
Fig. S8	Fatty acids in trout fillets (%)	C18:2	BioMar fillet	compared to	Basic fillet	One way ANOVA	Games-Howell	.000	***

Fig. S8	Fatty acids in trout fillets (%)	C18:2	BioMar fillet	compared to	Control tomato fillet	One way ANOVA	Games-Howell	.000	***
Fig. S8	Fatty acids in trout fillets (%)	C18:2	BioMar fillet	compared to	ZWRI tomato fillet	One way ANOVA	Games-Howell	.000	***
Fig. S8	Fatty acids in trout fillets (%)	C18:2	Basic fillet	compared to	Control tomato fillet	One way ANOVA	Games-Howell	.162	
Fig. S8	Fatty acids in trout fillets (%)	C18:2	Basic fillet	compared to	ZWRI tomato fillet	One way ANOVA	Games-Howell	.359	
Fig. S8	Fatty acids in trout fillets (%)	C18:2	ZWRI tomato fillet	compared to	Control tomato fillet	One way ANOVA	Games-Howell	.002	**
Fig. S8	Fatty acids in trout fillets (%)	C18:3	BioMar fillet	compared to	Basic fillet	One way ANOVA	Games-Howell	.000	***
Fig. S8	Fatty acids in trout fillets (%)	C18:3	BioMar fillet	compared to	Control tomato fillet	One way ANOVA	Games-Howell	.000	***
Fig. S8	Fatty acids in trout fillets (%)	C18:3	BioMar fillet	compared to	ZWRI tomato fillet	One way ANOVA	Games-Howell	.000	***
Fig. S8	Fatty acids in trout fillets (%)	C18:3	Basic fillet	compared to	Control tomato fillet	One way ANOVA	Games-Howell	.405	
Fig. S8	Fatty acids in trout fillets (%)	C18:3	Basic fillet	compared to	ZWRI tomato fillet	One way ANOVA	Games-Howell	.000	***
Fig. S8	Fatty acids in trout fillets (%)	C18:3	ZWRI tomato fillet	compared to	Control tomato fillet	One way ANOVA	Games-Howell	.116	

Fig. S8	Fatty acids in trout fillets (%)	C20:1	BioMar fillet	compared to	Basic fillet	One way ANOVA	Tukey	.000	***
Fig. S8	Fatty acids in trout fillets (%)	C20:1	BioMar fillet	compared to	Control tomato fillet	One way ANOVA	Tukey	.000	***
Fig. S8	Fatty acids in trout fillets (%)	C20:1	BioMar fillet	compared to	ZWRI tomato fillet	One way ANOVA	Tukey	.000	***
Fig. S8	Fatty acids in trout fillets (%)	C20:1	Basic fillet	compared to	Control tomato fillet	One way ANOVA	Tukey	.180	
Fig. S8	Fatty acids in trout fillets (%)	C20:1	Basic fillet	compared to	ZWRI tomato fillet	One way ANOVA	Tukey	.098	
Fig. S8	Fatty acids in trout fillets (%)	C20:1	ZWRI tomato fillet	compared to	Control tomato fillet	One way ANOVA	Tukey	.993	
Fig. S8	Fatty acids in trout fillets (%)	C20:5	BioMar fillet	compared to	Basic fillet	One way ANOVA	Games-Howell	.000	***
Fig. S8	Fatty acids in trout fillets (%)	C20:5	BioMar fillet	compared to	Control tomato fillet	One way ANOVA	Games-Howell	.000	***
Fig. S8	Fatty acids in trout fillets (%)	C20:5	BioMar fillet	compared to	ZWRI tomato fillet	One way ANOVA	Games-Howell	.000	***
Fig. S8	Fatty acids in trout fillets (%)	C20:5	Basic fillet	compared to	Control tomato fillet	One way ANOVA	Games-Howell	.983	
Fig. S8	Fatty acids in trout fillets (%)	C20:5	Basic fillet	compared to	ZWRI tomato fillet	One way ANOVA	Games-Howell	.997	

Fig. S8	Fatty acids in trout fillets (%)	C20:5	ZWRI tomato fillet	compared to	Control tomato fillet	One way ANOVA	Games-Howell	.963	
Fig. S8	Fatty acids in trout fillets (%)	C22:6	BioMar fillet	compared to	Basic fillet	One way ANOVA	Games-Howell	.000	***
Fig. S8	Fatty acids in trout fillets (%)	C22:6	BioMar fillet	compared to	Control tomato fillet	One way ANOVA	Games-Howell	.000	***
Fig. S8	Fatty acids in trout fillets (%)	C22:6	BioMar fillet	compared to	ZWRI tomato fillet	One way ANOVA	Games-Howell	.000	***
Fig. S8	Fatty acids in trout fillets (%)	C22:6	Basic fillet	compared to	Control tomato fillet	One way ANOVA	Games-Howell	.957	
Fig. S8	Fatty acids in trout fillets (%)	C22:6	Basic fillet	compared to	ZWRI tomato fillet	One way ANOVA	Games-Howell	.023	*
Fig. S8	Fatty acids in trout fillets (%)	C22:6	ZWRI tomato fillet	compared to	Control tomato fillet	One way ANOVA	Games-Howell	.149	
Fig. S8	Fatty acids in feeds (%)	C14:0	BioMar feed	compared to	Basic feed	One way ANOVA	Games-Howell	.003	**
Fig. S8	Fatty acids in feeds (%)	C14:0	BioMar feed	compared to	Control tomato feed	One way ANOVA	Games-Howell	.005	**
Fig. S8	Fatty acids in feeds (%)	C14:0	BioMar feed	compared to	ZWRI tomato feed	One way ANOVA	Games-Howell	.009	**
Fig. S8	Fatty acids in feeds (%)	C14:0	Basic feed	compared to	Control tomato feed	One way ANOVA	Games-Howell	.855	

Fig. S8	Fatty acids in feeds (%)	C14:0	Basic feed	compared to	ZWRI tomato feed	One way ANOVA	Games-Howell	.269	
Fig. S8	Fatty acids in feeds (%)	C14:0	ZWRI tomato feed	compared to	Control tomato feed	One way ANOVA	Games-Howell	.483	
Fig. S8	Fatty acids in feeds (%)	C16:0	BioMar feed	compared to	Basic feed	One way ANOVA	Games-Howell	.000	***
Fig. S8	Fatty acids in feeds (%)	C16:0	BioMar feed	compared to	Control tomato feed	One way ANOVA	Games-Howell	.004	**
Fig. S8	Fatty acids in feeds (%)	C16:0	BioMar feed	compared to	ZWRI tomato feed	One way ANOVA	Games-Howell	.001	**
Fig. S8	Fatty acids in feeds (%)	C16:0	Basic feed	compared to	Control tomato feed	One way ANOVA	Games-Howell	.863	
Fig. S8	Fatty acids in feeds (%)	C16:0	Basic feed	compared to	ZWRI tomato feed	One way ANOVA	Games-Howell	.078	
Fig. S8	Fatty acids in feeds (%)	C16:0	ZWRI tomato feed	compared to	Control tomato feed	One way ANOVA	Games-Howell	.380	
Fig. S8	Fatty acids in feeds (%)	C16:1	BioMar feed	compared to	Basic feed	One way ANOVA	Games-Howell	.000	***
Fig. S8	Fatty acids in feeds (%)	C16:1	BioMar feed	compared to	Control tomato feed	One way ANOVA	Games-Howell	.000	***
Fig. S8	Fatty acids in feeds (%)	C16:1	BioMar feed	compared to	ZWRI tomato feed	One way ANOVA	Games-Howell	.002	**

Fig. S8	Fatty acids in feeds (%)	C16:1	Basic feed	compared to	Control tomato feed	One way ANOVA	Games-Howell	.887	
Fig. S8	Fatty acids in feeds (%)	C16:1	Basic feed	compared to	ZWRI tomato feed	One way ANOVA	Games-Howell	.504	
Fig. S8	Fatty acids in feeds (%)	C16:1	ZWRI tomato feed	compared to	Control tomato feed	One way ANOVA	Games-Howell	.768	
Fig. S8	Fatty acids in feeds (%)	C18:0	BioMar feed	compared to	Basic feed	One way ANOVA	Games-Howell	.004	**
Fig. S8	Fatty acids in feeds (%)	C18:0	BioMar feed	compared to	Control tomato feed	One way ANOVA	Games-Howell	.081	
Fig. S8	Fatty acids in feeds (%)	C18:0	BioMar feed	compared to	ZWRI tomato feed	One way ANOVA	Games-Howell	.020	*
Fig. S8	Fatty acids in feeds (%)	C18:0	Basic feed	compared to	Control tomato feed	One way ANOVA	Games-Howell	.441	
Fig. S8	Fatty acids in feeds (%)	C18:0	Basic feed	compared to	ZWRI tomato feed	One way ANOVA	Games-Howell	.979	
Fig. S8	Fatty acids in feeds (%)	C18:0	ZWRI tomato feed	compared to	Control tomato feed	One way ANOVA	Games-Howell	.768	
Fig. S8	Fatty acids in feeds (%)	C18:1	BioMar feed	compared to	Basic feed	One way ANOVA	Games-Howell	.000	***
Fig. S8	Fatty acids in feeds (%)	C18:1	BioMar feed	compared to	Control tomato feed	One way ANOVA	Games-Howell	.001	***

Fig. S8	Fatty acids in feeds (%)	C18:1	BioMar feed	compared to	ZWRI tomato feed	One way ANOVA	Games-Howell	.000	***
Fig. S8	Fatty acids in feeds (%)	C18:1	Basic feed	compared to	Control tomato feed	One way ANOVA	Games-Howell	.808	
Fig. S8	Fatty acids in feeds (%)	C18:1	Basic feed	compared to	ZWRI tomato feed	One way ANOVA	Games-Howell	.285	
Fig. S8	Fatty acids in feeds (%)	C18:1	ZWRI tomato feed	compared to	Control tomato feed	One way ANOVA	Games-Howell	.677	
Fig. S8	Fatty acids in feeds (%)	C18:2	BioMar feed	compared to	Basic feed	One way ANOVA	Games-Howell	.000	***
Fig. S8	Fatty acids in feeds (%)	C18:2	BioMar feed	compared to	Control tomato feed	One way ANOVA	Games-Howell	.000	***
Fig. S8	Fatty acids in feeds (%)	C18:2	BioMar feed	compared to	ZWRI tomato feed	One way ANOVA	Games-Howell	.000	***
Fig. S8	Fatty acids in feeds (%)	C18:2	Basic feed	compared to	Control tomato feed	One way ANOVA	Games-Howell	.493	
Fig. S8	Fatty acids in feeds (%)	C18:2	Basic feed	compared to	ZWRI tomato feed	One way ANOVA	Games-Howell	1.000	
Fig. S8	Fatty acids in feeds (%)	C18:2	ZWRI tomato feed	compared to	Control tomato feed	One way ANOVA	Games-Howell	.076	
Fig. S8	Fatty acids in feeds (%)	C18:3	BioMar feed	compared to	Basic feed	One way ANOVA	Games-Howell	.000	***

Fig. S8	Fatty acids in feeds (%)	C18:3	BioMar feed	compared to	Control tomato feed	One way ANOVA	Games-Howell	.000	***
Fig. S8	Fatty acids in feeds (%)	C18:3	BioMar feed	compared to	ZWRI tomato feed	One way ANOVA	Games-Howell	.000	***
Fig. S8	Fatty acids in feeds (%)	C18:3	Basic feed	compared to	Control tomato feed	One way ANOVA	Games-Howell	.716	
Fig. S8	Fatty acids in feeds (%)	C18:3	Basic feed	compared to	ZWRI tomato feed	One way ANOVA	Games-Howell	.269	
Fig. S8	Fatty acids in feeds (%)	C18:3	ZWRI tomato feed	compared to	Control tomato feed	One way ANOVA	Games-Howell	.768	
Fig. S8	Fatty acids in feeds (%)	C20:1	BioMar feed	compared to	Basic feed	One way ANOVA	Games-Howell	.001	***
Fig. S8	Fatty acids in feeds (%)	C20:1	BioMar feed	compared to	Control tomato feed	One way ANOVA	Games-Howell	.000	***
Fig. S8	Fatty acids in feeds (%)	C20:1	BioMar feed	compared to	ZWRI tomato feed	One way ANOVA	Games-Howell	.001	**
Fig. S8	Fatty acids in feeds (%)	C20:1	Basic feed	compared to	Control tomato feed	One way ANOVA	Games-Howell	.427	
Fig. S8	Fatty acids in feeds (%)	C20:1	Basic feed	compared to	ZWRI tomato feed	One way ANOVA	Games-Howell	.717	
Fig. S8	Fatty acids in feeds (%)	C20:1	ZWRI tomato feed	compared to	Control tomato feed	One way ANOVA	Games-Howell	.406	

Fig. S8	Fatty acids in feeds (%)	C20:5	BioMar feed	compared to	Basic feed	One way ANOVA	Games-Howell	.000	***
Fig. S8	Fatty acids in feeds (%)	C20:5	BioMar feed	compared to	Control tomato feed	One way ANOVA	Games-Howell	.003	**
Fig. S8	Fatty acids in feeds (%)	C20:5	BioMar feed	compared to	ZWRI tomato feed	One way ANOVA	Games-Howell	.000	***
Fig. S8	Fatty acids in feeds (%)	C20:5	Basic feed	compared to	Control tomato feed	One way ANOVA	Games-Howell	.716	
Fig. S8	Fatty acids in feeds (%)	C20:5	Basic feed	compared to	ZWRI tomato feed	One way ANOVA	Games-Howell	.190	
Fig. S8	Fatty acids in feeds (%)	C20:5	ZWRI tomato feed	compared to	Control tomato feed	One way ANOVA	Games-Howell	.602	
Fig. S8	Fatty acids in feeds (%)	C22:0	BioMar feed	compared to	Basic feed	One way ANOVA	Games-Howell	.011	*
Fig. S8	Fatty acids in feeds (%)	C22:0	BioMar feed	compared to	Control tomato feed	One way ANOVA	Games-Howell	.004	**
Fig. S8	Fatty acids in feeds (%)	C22:0	BioMar feed	compared to	ZWRI tomato feed	One way ANOVA	Games-Howell	.015	*
Fig. S8	Fatty acids in feeds (%)	C22:0	Basic feed	compared to	Control tomato feed	One way ANOVA	Games-Howell	.305	
Fig. S8	Fatty acids in feeds (%)	C22:0	Basic feed	compared to	ZWRI tomato feed	One way ANOVA	Games-Howell	.369	

Fig. S8	Fatty acids in feeds (%)	C22:0	ZWRI tomato feed	compared to	Control tomato feed	One way ANOVA	Games-Howell	.914	
Fig. S8	Fatty acids in feeds (%)	C22:6	BioMar feed	compared to	Basic feed	One way ANOVA	Games-Howell	.004	**
Fig. S8	Fatty acids in feeds (%)	C22:6	BioMar feed	compared to	Control tomato feed	One way ANOVA	Games-Howell	.071	
Fig. S8	Fatty acids in feeds (%)	C22:6	BioMar feed	compared to	ZWRI tomato feed	One way ANOVA	Games-Howell	.004	**
Fig. S8	Fatty acids in feeds (%)	C22:6	Basic feed	compared to	Control tomato feed	One way ANOVA	Games-Howell	.973	
Fig. S8	Fatty acids in feeds (%)	C22:6	Basic feed	compared to	ZWRI tomato feed	One way ANOVA	Games-Howell	.075	
Fig. S8	Fatty acids in feeds (%)	C22:6	ZWRI tomato feed	compared to	Control tomato feed	One way ANOVA	Games-Howell	.424	
Fig. S8	Fatty acids in trout fillets (mg/g DW)	C14:0	BioMar fillet	compared to	Basic fillet	One way ANOVA	Games-Howell	.156	
Fig. S8	Fatty acids in trout fillets (mg/g DW)	C14:0	BioMar fillet	compared to	Control tomato fillet	One way ANOVA	Games-Howell	.153	
Fig. S8	Fatty acids in trout fillets (mg/g DW)	C14:0	BioMar fillet	compared to	ZWRI tomato fillet	One way ANOVA	Games-Howell	.460	
Fig. S8	Fatty acids in trout fillets (mg/g DW)	C14:0	Basic fillet	compared to	Control tomato fillet	One way ANOVA	Games-Howell	1.000	

Fig. S8	Fatty acids in trout fillets (mg/g DW)	C14:0	Basic fillet	compared to	ZWRI tomato fillet	One way ANOVA	Games-Howell	.003	**
Fig. S8	Fatty acids in trout fillets (mg/g DW)	C14:0	ZWRI tomato fillet	compared to	Control tomato fillet	One way ANOVA	Games-Howell	.003	**
Fig. S8	Fatty acids in trout fillets (mg/g DW)	C16:0	BioMar fillet	compared to	Basic fillet	One way ANOVA	Tukey	.000	***
Fig. S8	Fatty acids in trout fillets (mg/g DW)	C16:0	BioMar fillet	compared to	Control tomato fillet	One way ANOVA	Tukey	.000	***
Fig. S8	Fatty acids in trout fillets (mg/g DW)	C16:0	BioMar fillet	compared to	ZWRI tomato fillet	One way ANOVA	Tukey	.000	***
Fig. S8	Fatty acids in trout fillets (mg/g DW)	C16:0	Basic fillet	compared to	Control tomato fillet	One way ANOVA	Tukey	1.000	
Fig. S8	Fatty acids in trout fillets (mg/g DW)	C16:0	Basic fillet	compared to	ZWRI tomato fillet	One way ANOVA	Tukey	.000	***
Fig. S8	Fatty acids in trout fillets (mg/g DW)	C16:0	ZWRI tomato fillet	compared to	Control tomato fillet	One way ANOVA	Tukey	.000	***
Fig. S8	Fatty acids in trout fillets (mg/g DW)	C16:1	BioMar fillet	compared to	Basic fillet	One way ANOVA	Games-Howell	.000	***
Fig. S8	Fatty acids in trout fillets (mg/g DW)	C16:1	BioMar fillet	compared to	Control tomato fillet	One way ANOVA	Games-Howell	.000	***
Fig. S8	Fatty acids in trout fillets (mg/g DW)	C16:1	BioMar fillet	compared to	ZWRI tomato fillet	One way ANOVA	Games-Howell	.108	

Fig. S8	Fatty acids in trout fillets (mg/g DW)	C16:1	Basic fillet	compared to	Control tomato fillet	One way ANOVA	Games-Howell	.881	
Fig. S8	Fatty acids in trout fillets (mg/g DW)	C16:1	Basic fillet	compared to	ZWRI tomato fillet	One way ANOVA	Games-Howell	.002	**
Fig. S8	Fatty acids in trout fillets (mg/g DW)	C16:1	ZWRI tomato fillet	compared to	Control tomato fillet	One way ANOVA	Games-Howell	.000	***
Fig. S8	Fatty acids in trout fillets (mg/g DW)	C18:0	BioMar fillet	compared to	Basic fillet	One way ANOVA	Tukey	.000	***
Fig. S8	Fatty acids in trout fillets (mg/g DW)	C18:0	BioMar fillet	compared to	Control tomato fillet	One way ANOVA	Tukey	.000	***
Fig. S8	Fatty acids in trout fillets (mg/g DW)	C18:0	BioMar fillet	compared to	ZWRI tomato fillet	One way ANOVA	Tukey	.000	***
Fig. S8	Fatty acids in trout fillets (mg/g DW)	C18:0	Basic fillet	compared to	Control tomato fillet	One way ANOVA	Tukey	.861	
Fig. S8	Fatty acids in trout fillets (mg/g DW)	C18:0	Basic fillet	compared to	ZWRI tomato fillet	One way ANOVA	Tukey	.000	***
Fig. S8	Fatty acids in trout fillets (mg/g DW)	C18:0	ZWRI tomato fillet	compared to	Control tomato fillet	One way ANOVA	Tukey	.000	***
Fig. S8	Fatty acids in trout fillets (mg/g DW)	C18:1	BioMar fillet	compared to	Basic fillet	One way ANOVA	Games-Howell	.286	
Fig. S8	Fatty acids in trout fillets (mg/g DW)	C18:1	BioMar fillet	compared to	Control tomato fillet	One way ANOVA	Games-Howell	.294	

Fig. S8	Fatty acids in trout fillets (mg/g DW)	C18:1	BioMar fillet	compared to	ZWRI tomato fillet	One way ANOVA	Games-Howell	.000	***
Fig. S8	Fatty acids in trout fillets (mg/g DW)	C18:1	Basic fillet	compared to	Control tomato fillet	One way ANOVA	Games-Howell	1.000	
Fig. S8	Fatty acids in trout fillets (mg/g DW)	C18:1	Basic fillet	compared to	ZWRI tomato fillet	One way ANOVA	Games-Howell	.000	***
Fig. S8	Fatty acids in trout fillets (mg/g DW)	C18:1	ZWRI tomato fillet	compared to	Control tomato fillet	One way ANOVA	Games-Howell	.000	***
Fig. S8	Fatty acids in trout fillets (mg/g DW)	C18:2	BioMar fillet	compared to	Basic fillet	One way ANOVA	Games-Howell	.000	***
Fig. S8	Fatty acids in trout fillets (mg/g DW)	C18:2	BioMar fillet	compared to	Control tomato fillet	One way ANOVA	Games-Howell	.000	***
Fig. S8	Fatty acids in trout fillets (mg/g DW)	C18:2	BioMar fillet	compared to	ZWRI tomato fillet	One way ANOVA	Games-Howell	.000	***
Fig. S8	Fatty acids in trout fillets (mg/g DW)	C18:2	Basic fillet	compared to	Control tomato fillet	One way ANOVA	Games-Howell	.885	
Fig. S8	Fatty acids in trout fillets (mg/g DW)	C18:2	Basic fillet	compared to	ZWRI tomato fillet	One way ANOVA	Games-Howell	.000	***
Fig. S8	Fatty acids in trout fillets (mg/g DW)	C18:2	ZWRI tomato fillet	compared to	Control tomato fillet	One way ANOVA	Games-Howell	.014	*
Fig. S8	Fatty acids in trout fillets (mg/g DW)	C18:3	BioMar fillet	compared to	Basic fillet	One way ANOVA	Games-Howell	.000	***

Fig. S8	Fatty acids in trout fillets (mg/g DW)	C18:3	BioMar fillet	compared to	Control tomato fillet	One way ANOVA	Games-Howell	.000	***
Fig. S8	Fatty acids in trout fillets (mg/g DW)	C18:3	BioMar fillet	compared to	ZWRI tomato fillet	One way ANOVA	Games-Howell	.000	***
Fig. S8	Fatty acids in trout fillets (mg/g DW)	C18:3	Basic fillet	compared to	Control tomato fillet	One way ANOVA	Games-Howell	.259	
Fig. S8	Fatty acids in trout fillets (mg/g DW)	C18:3	Basic fillet	compared to	ZWRI tomato fillet	One way ANOVA	Games-Howell	.000	***
Fig. S8	Fatty acids in trout fillets (mg/g DW)	C18:3	ZWRI tomato fillet	compared to	Control tomato fillet	One way ANOVA	Games-Howell	.000	***
Fig. S8	Fatty acids in trout fillets (mg/g DW)	C20:1	BioMar fillet	compared to	Basic fillet	One way ANOVA	Games-Howell	.000	***
Fig. S8	Fatty acids in trout fillets (mg/g DW)	C20:1	BioMar fillet	compared to	Control tomato fillet	One way ANOVA	Games-Howell	.000	***
Fig. S8	Fatty acids in trout fillets (mg/g DW)	C20:1	BioMar fillet	compared to	ZWRI tomato fillet	One way ANOVA	Games-Howell	.000	***
Fig. S8	Fatty acids in trout fillets (mg/g DW)	C20:1	Basic fillet	compared to	Control tomato fillet	One way ANOVA	Games-Howell	.688	
Fig. S8	Fatty acids in trout fillets (mg/g DW)	C20:1	Basic fillet	compared to	ZWRI tomato fillet	One way ANOVA	Games-Howell	.019	*
Fig. S8	Fatty acids in trout fillets (mg/g DW)	C20:1	ZWRI tomato fillet	compared to	Control tomato fillet	One way ANOVA	Games-Howell	.003	**

Fig. S8	Fatty acids in trout fillets (mg/g DW)	C20:5	BioMar fillet	compared to	Basic fillet	One way ANOVA	Games-Howell	.000	***
Fig. S8	Fatty acids in trout fillets (mg/g DW)	C20:5	BioMar fillet	compared to	Control tomato fillet	One way ANOVA	Games-Howell	.000	***
Fig. S8	Fatty acids in trout fillets (mg/g DW)	C20:5	BioMar fillet	compared to	ZWRI tomato fillet	One way ANOVA	Games-Howell	.000	***
Fig. S8	Fatty acids in trout fillets (mg/g DW)	C20:5	Basic fillet	compared to	Control tomato fillet	One way ANOVA	Games-Howell	.999	
Fig. S8	Fatty acids in trout fillets (mg/g DW)	C20:5	Basic fillet	compared to	ZWRI tomato fillet	One way ANOVA	Games-Howell	.036	*
Fig. S8	Fatty acids in trout fillets (mg/g DW)	C20:5	ZWRI tomato fillet	compared to	Control tomato fillet	One way ANOVA	Games-Howell	.069	
Fig. S8	Fatty acids in trout fillets (mg/g DW)	C22:6	BioMar fillet	compared to	Basic fillet	One way ANOVA	Games-Howell	.002	**
Fig. S8	Fatty acids in trout fillets (mg/g DW)	C22:6	BioMar fillet	compared to	Control tomato fillet	One way ANOVA	Games-Howell	.002	**
Fig. S8	Fatty acids in trout fillets (mg/g DW)	C22:6	BioMar fillet	compared to	ZWRI tomato fillet	One way ANOVA	Games-Howell	.000	***
Fig. S8	Fatty acids in trout fillets (mg/g DW)	C22:6	Basic fillet	compared to	Control tomato fillet	One way ANOVA	Games-Howell	.997	
Fig. S8	Fatty acids in trout fillets (mg/g DW)	C22:6	Basic fillet	compared to	ZWRI tomato fillet	One way ANOVA	Games-Howell	.107	

Fig. S8	Fatty acids in trout fillets (mg/g DW)	C22:6	ZWRI tomato fillet	compared to	Control tomato fillet	One way ANOVA	Games-Howell	.063	
Fig. S8	Fatty acids in trout fillets (mg/g DW)	Total fatty acids	BioMar fillet	compared to	Basic fillet	One way ANOVA	Tukey	.000	***
Fig. S8	Fatty acids in trout fillets (mg/g DW)	Total fatty acids	BioMar fillet	compared to	Control tomato fillet	One way ANOVA	Tukey	.000	***
Fig. S8	Fatty acids in trout fillets (mg/g DW)	Total fatty acids	BioMar fillet	compared to	ZWRI tomato fillet	One way ANOVA	Tukey	.036	*
Fig. S8	Fatty acids in trout fillets (mg/g DW)	Total fatty acids	Basic fillet	compared to	Control tomato fillet	One way ANOVA	Tukey	.996	
Fig. S8	Fatty acids in trout fillets (mg/g DW)	Total fatty acids	Basic fillet	compared to	ZWRI tomato fillet	One way ANOVA	Tukey	.000	***
Fig. S8	Fatty acids in trout fillets (mg/g DW)	Total fatty acids	ZWRI tomato fillet	compared to	Control tomato fillet	One way ANOVA	Tukey	.000	***
Fig. S8	Fatty acids in trout feeds (mg/g DW)	C14:0	BioMar feed	compared to	Basic feed	One way ANOVA	Tukey	.042	*
Fig. S8	Fatty acids in trout feeds (mg/g DW)	C14:0	BioMar feed	compared to	Control tomato feed	One way ANOVA	Tukey	.001	**
Fig. S8	Fatty acids in trout feeds (mg/g DW)	C14:0	BioMar feed	compared to	ZWRI tomato feed	One way ANOVA	Tukey	.004	**
Fig. S8	Fatty acids in trout feeds (mg/g DW)	C14:0	Basic feed	compared to	Control tomato feed	One way ANOVA	Tukey	.058	

Fig. S8	Fatty acids in trout feeds (mg/g DW)	C14:0	Basic feed	compared to	ZWRI tomato feed	One way ANOVA	Tukey	.276	
Fig. S8	Fatty acids in trout feeds (mg/g DW)	C14:0	ZWRI tomato feed	compared to	Control tomato feed	One way ANOVA	Tukey	.747	
Fig. S8	Fatty acids in trout feeds (mg/g DW)	C16:0	BioMar feed	compared to	Basic feed	One way ANOVA	Games-Howell	.042	*
Fig. S8	Fatty acids in trout feeds (mg/g DW)	C16:0	BioMar feed	compared to	Control tomato feed	One way ANOVA	Games-Howell	.085	
Fig. S8	Fatty acids in trout feeds (mg/g DW)	C16:0	BioMar feed	compared to	ZWRI tomato feed	One way ANOVA	Games-Howell	.043	*
Fig. S8	Fatty acids in trout feeds (mg/g DW)	C16:0	Basic feed	compared to	Control tomato feed	One way ANOVA	Games-Howell	.140	
Fig. S8	Fatty acids in trout feeds (mg/g DW)	C16:0	Basic feed	compared to	ZWRI tomato feed	One way ANOVA	Games-Howell	.391	
Fig. S8	Fatty acids in trout feeds (mg/g DW)	C16:0	ZWRI tomato feed	compared to	Control tomato feed	One way ANOVA	Games-Howell	.344	
Fig. S8	Fatty acids in trout feeds (mg/g DW)	C16:1	BioMar feed	compared to	Basic feed	One way ANOVA	Tukey	.000	***
Fig. S8	Fatty acids in trout feeds (mg/g DW)	C16:1	BioMar feed	compared to	Control tomato feed	One way ANOVA	Tukey	.000	***
Fig. S8	Fatty acids in trout feeds (mg/g DW)	C16:1	BioMar feed	compared to	ZWRI tomato feed	One way ANOVA	Tukey	.000	***

Fig. S8	Fatty acids in trout feeds (mg/g DW)	C16:1	Basic feed	compared to	Control tomato feed	One way ANOVA	Tukey	.027	*
Fig. S8	Fatty acids in trout feeds (mg/g DW)	C16:1	Basic feed	compared to	ZWRI tomato feed	One way ANOVA	Tukey	.234	
Fig. S8	Fatty acids in trout feeds (mg/g DW)	C16:1	ZWRI tomato feed	compared to	Control tomato feed	One way ANOVA	Tukey	.549	
Fig. S8	Fatty acids in trout feeds (mg/g DW)	C18:0	BioMar feed	compared to	Basic feed	One way ANOVA	Games-Howell	.907	
Fig. S8	Fatty acids in trout feeds (mg/g DW)	C18:0	BioMar feed	compared to	Control tomato feed	One way ANOVA	Games-Howell	.019	*
Fig. S8	Fatty acids in trout feeds (mg/g DW)	C18:0	BioMar feed	compared to	ZWRI tomato feed	One way ANOVA	Games-Howell	.239	
Fig. S8	Fatty acids in trout feeds (mg/g DW)	C18:0	Basic feed	compared to	Control tomato feed	One way ANOVA	Games-Howell	.190	
Fig. S8	Fatty acids in trout feeds (mg/g DW)	C18:0	Basic feed	compared to	ZWRI tomato feed	One way ANOVA	Games-Howell	.428	
Fig. S8	Fatty acids in trout feeds (mg/g DW)	C18:0	ZWRI tomato feed	compared to	Control tomato feed	One way ANOVA	Games-Howell	.380	
Fig. S8	Fatty acids in trout feeds (mg/g DW)	C18:1	BioMar feed	compared to	Basic feed	One way ANOVA	Games-Howell	.192	
Fig. S8	Fatty acids in trout feeds (mg/g DW)	C18:1	BioMar feed	compared to	Control tomato feed	One way ANOVA	Games-Howell	.002	**

Fig. S8	Fatty acids in trout feeds (mg/g DW)	C18:1	BioMar feed	compared to	ZWRI tomato feed	One way ANOVA	Games-Howell	.023	*
Fig. S8	Fatty acids in trout feeds (mg/g DW)	C18:1	Basic feed	compared to	Control tomato feed	One way ANOVA	Games-Howell	.165	
Fig. S8	Fatty acids in trout feeds (mg/g DW)	C18:1	Basic feed	compared to	ZWRI tomato feed	One way ANOVA	Games-Howell	.470	
Fig. S8	Fatty acids in trout feeds (mg/g DW)	C18:1	ZWRI tomato feed	compared to	Control tomato feed	One way ANOVA	Games-Howell	.405	
Fig. S8	Fatty acids in trout feeds (mg/g DW)	C18:2	BioMar feed	compared to	Basic feed	One way ANOVA	Games-Howell	.014	*
Fig. S8	Fatty acids in trout feeds (mg/g DW)	C18:2	BioMar feed	compared to	Control tomato feed	One way ANOVA	Games-Howell	.023	*
Fig. S8	Fatty acids in trout feeds (mg/g DW)	C18:2	BioMar feed	compared to	ZWRI tomato feed	One way ANOVA	Games-Howell	.021	*
Fig. S8	Fatty acids in trout feeds (mg/g DW)	C18:2	Basic feed	compared to	Control tomato feed	One way ANOVA	Games-Howell	.120	
Fig. S8	Fatty acids in trout feeds (mg/g DW)	C18:2	Basic feed	compared to	ZWRI tomato feed	One way ANOVA	Games-Howell	.438	
Fig. S8	Fatty acids in trout feeds (mg/g DW)	C18:2	ZWRI tomato feed	compared to	Control tomato feed	One way ANOVA	Games-Howell	.310	
Fig. S8	Fatty acids in trout feeds (mg/g DW)	C18:3	BioMar feed	compared to	Basic feed	One way ANOVA	Tukey	.000	***

Fig. S8	Fatty acids in trout feeds (mg/g DW)	C18:3	BioMar feed	compared to	Control tomato feed	One way ANOVA	Tukey	.000	***
Fig. S8	Fatty acids in trout feeds (mg/g DW)	C18:3	BioMar feed	compared to	ZWRI tomato feed	One way ANOVA	Tukey	.000	***
Fig. S8	Fatty acids in trout feeds (mg/g DW)	C18:3	Basic feed	compared to	Control tomato feed	One way ANOVA	Tukey	.026	*
Fig. S8	Fatty acids in trout feeds (mg/g DW)	C18:3	Basic feed	compared to	ZWRI tomato feed	One way ANOVA	Tukey	.242	
Fig. S8	Fatty acids in trout feeds (mg/g DW)	C18:3	ZWRI tomato feed	compared to	Control tomato feed	One way ANOVA	Tukey	.517	
Fig. S8	Fatty acids in trout feeds (mg/g DW)	C20:1	BioMar feed	compared to	Basic feed	One way ANOVA	Games-Howell	.190	
Fig. S8	Fatty acids in trout feeds (mg/g DW)	C20:1	BioMar feed	compared to	Control tomato feed	One way ANOVA	Games-Howell	.001	**
Fig. S8	Fatty acids in trout feeds (mg/g DW)	C20:1	BioMar feed	compared to	ZWRI tomato feed	One way ANOVA	Games-Howell	.013	*
Fig. S8	Fatty acids in trout feeds (mg/g DW)	C20:1	Basic feed	compared to	Control tomato feed	One way ANOVA	Games-Howell	.247	
Fig. S8	Fatty acids in trout feeds (mg/g DW)	C20:1	Basic feed	compared to	ZWRI tomato feed	One way ANOVA	Games-Howell	.474	
Fig. S8	Fatty acids in trout feeds (mg/g DW)	C20:1	ZWRI tomato feed	compared to	Control tomato feed	One way ANOVA	Games-Howell	.514	

Fig. S8	Fatty acids in trout feeds (mg/g DW)	C20:5	BioMar feed	compared to	Basic feed	One way ANOVA	Tukey	.003	**
Fig. S8	Fatty acids in trout feeds (mg/g DW)	C20:5	BioMar feed	compared to	Control tomato feed	One way ANOVA	Tukey	.000	***
Fig. S8	Fatty acids in trout feeds (mg/g DW)	C20:5	BioMar feed	compared to	ZWRI tomato feed	One way ANOVA	Tukey	.000	***
Fig. S8	Fatty acids in trout feeds (mg/g DW)	C20:5	Basic feed	compared to	Control tomato feed	One way ANOVA	Tukey	.045	*
Fig. S8	Fatty acids in trout feeds (mg/g DW)	C20:5	Basic feed	compared to	ZWRI tomato feed	One way ANOVA	Tukey	.216	
Fig. S8	Fatty acids in trout feeds (mg/g DW)	C20:5	ZWRI tomato feed	compared to	Control tomato feed	One way ANOVA	Tukey	.757	
Fig. S8	Fatty acids in trout feeds (mg/g DW)	C22:0	BioMar feed	compared to	Basic feed	One way ANOVA	Games-Howell	.680	
Fig. S8	Fatty acids in trout feeds (mg/g DW)	C22:0	BioMar feed	compared to	Control tomato feed	One way ANOVA	Games-Howell	.013	*
Fig. S8	Fatty acids in trout feeds (mg/g DW)	C22:0	BioMar feed	compared to	ZWRI tomato feed	One way ANOVA	Games-Howell	.026	*
Fig. S8	Fatty acids in trout feeds (mg/g DW)	C22:0	Basic feed	compared to	Control tomato feed	One way ANOVA	Games-Howell	.255	
Fig. S8	Fatty acids in trout feeds (mg/g DW)	C22:0	Basic feed	compared to	ZWRI tomato feed	One way ANOVA	Games-Howell	.428	

Fig. S8	Fatty acids in trout feeds (mg/g DW)	C22:0	ZWRI tomato feed	compared to	Control tomato feed	One way ANOVA	Games-Howell	.751	
Fig. S8	Fatty acids in trout feeds (mg/g DW)	C22:6	BioMar feed	compared to	Basic feed	One way ANOVA	Games-Howell	.996	
Fig. S8	Fatty acids in trout feeds (mg/g DW)	C22:6	BioMar feed	compared to	Control tomato feed	One way ANOVA	Games-Howell	.056	
Fig. S8	Fatty acids in trout feeds (mg/g DW)	C22:6	BioMar feed	compared to	ZWRI tomato feed	One way ANOVA	Games-Howell	.020	*
Fig. S8	Fatty acids in trout feeds (mg/g DW)	C22:6	Basic feed	compared to	Control tomato feed	One way ANOVA	Games-Howell	.210	
Fig. S8	Fatty acids in trout feeds (mg/g DW)	C22:6	Basic feed	compared to	ZWRI tomato feed	One way ANOVA	Games-Howell	.389	
Fig. S8	Fatty acids in trout feeds (mg/g DW)	C22:6	ZWRI tomato feed	compared to	Control tomato feed	One way ANOVA	Games-Howell	.499	
Fig. S8	Fatty acids in trout feeds (mg/g DW)	Total fatty acids	BioMar feed	compared to	Basic feed	One way ANOVA	Games-Howell	.316	
Fig. S8	Fatty acids in trout feeds (mg/g DW)	Total fatty acids	BioMar feed	compared to	Control tomato feed	One way ANOVA	Games-Howell	.305	
Fig. S8	Fatty acids in trout feeds (mg/g DW)	Total fatty acids	BioMar feed	compared to	ZWRI tomato feed	One way ANOVA	Games-Howell	.950	
Fig. S8	Fatty acids in trout feeds (mg/g DW)	Total fatty acids	Basic feed	compared to	Control tomato feed	One way ANOVA	Games-Howell	.144	

Fig. S8	Fatty acids in trout feeds (mg/g DW)	Total fatty acids	Basic feed	compared to	ZWRI tomato feed	One way ANOVA	Games-Howell	.430
Fig. S8	Fatty acids in trout feeds (mg/g DW)	Total fatty acids	ZWRI tomato feed	compared to	Control tomato feed	One way ANOVA	Games-Howell	.357

The type of statistical analysis used to find significant differences of a dependent variable between samples are shown as well as the p-values obtained for each statistical test. *, P<0.05; **, P<0.01 and ***, P<0.001.