Table 1. Olive tree pruning biomass composition (Dry matter, %).

Component	% Dry matter
Glucans	23.7
Cellulose	22.3 ± 0.4
Starch	1.4 ± 0.03
Hemicellulose	17.5
Xylan	11.8 ± 0.3
Galactan	2.6 ± 0.06
Arabinan	3.9 ± 0.06
Total Lignin	17.8
Acid-insoluble lignin (AIL)	16.6± 0.60
Extractives	24.5 ± 2.9
Glucose in extractives	6.2 ± 0.11
Ashes	4.1 + 0.2
Acetyl groups	2.3 ± 0.1

Table 2. Composition of washed extruded solid (WES), glucan enzymatic hydrolysis yield ($EH_{G,}$ %), xylan enzymatic hydrolysis yield ($EH_{X,}$ %), overall glucose yield (g.100 g^{-1} OTP) and overall xylose yield (g.100 g^{-1} OTP)

Screw speed (rpm)	Temperature (ºC)	Composition content (%)				Enzymatic hydrolysis yield ($EH_{G,}$ %)	Enzymatic hydrolysis yield ($EH_{x,}$ %)	Overall Glucose yield g.100 g^{-1} OTP	Overall xylose yield g.100 g^{-1} OTP
		NaOH g/100 g OTP biomass	Glucan	Hemi-cellulose	Lignin				
70	70	5	31.7	21.4	24.4	27.05	24.31	12.63	3.28
		10	31.4	22.3	24.5	45.96	42.26	16.14	6.13
	90	5	35.3	21.2	25.5	28.75	31.14	12.83	4.10
		10	32.7	22.2	25.1	35.13	34.21	14.44	4.81
	110	5	38.3	24.5	25.8	33.08	35.65	15.46	4.97
		10	37	26	25.2	46.65	49.54	19.47	8.39
150	70	5	33.8	23.6	25.2	29.22	22.05	12.18	2.85
		10	34.9	23.3	24.8	51.66	57.00	16.34	7.47
	90	5	34.5	22.9	24.6	22.74	40.89	10.73	5.06
		10	37.2	22.9	24.7	58.29	63.20	19.07	8.65
	110	5	38.8	26.5	24.5	32.41	33.88	13.77	4.87
		10	36.4	23.7	27.3	65.79	69.44	21.01	9.54
150	110	0	32.8	26.1	27.6	19.08	7.20	9.95	7.25

Table 3. Filtrate composition (g/100 g OTP)

Screw speed (rpm)	70						150					
Temperature (ºC)	70		90		110		70		90		110	
NaOH g/100 g biomass	5	10	5	10	5	10	5	10	5	10	5	10
Glucose	5.37±0.04	4.96±0.15	4.94±0.07	5.38±0.16	5.70±0.16	4.93±0.26	4.69±0.31	5.46±0.23	5.12±0.11	4.16±0.18	4.15±0.15	5.45±0.62
Xylose	0.34±0.00	0.93±0.03	0.29±0.01	0.47±0.01	0.18±0.01	0.51±0.02	0.34±0.01	1.94±0.09	0.30±0.03	1.37±0.10	0.24±0.01	0.62±0.15
Galactose	0.79±0.01	0.74±0.02	0.83±0.02	0.98±0.04	0.95±0.03	0.83±0.51	0.72±0.05	1.04±0.07	0.90±0.03	0.66±0.03	0.86±0.02	1.06±0.10
Arabinose	0.56±0.02	0.55±0.02	0.83±0.03	1.18±0.04	1.18±0.04	1.68±0.08	0.54±0.03	1.24±0.05	0.78±0.01	0.46±0.01	1.06±0.01	1.77±0.11
Mannose	0.06±0.00	0.04±0.00	0.06±0.00	0.02±0.00	0.02±0.00	0.06±0.01	0.08±0.00	0.08±0.01	0.08±0.00	0.08±0.01	0.05±0.00	0.05±0.01
Mannitol	2.69±0.04	2.55±0.04	2.85±0.04	2.88±0.03	3.50±0.05	2.82±0.15	1.67±0.04	3.05±0.14	2.72±0.05	1.59±0.01	2.17±0.12	2.90±0.49
Fructose	0.32±0.01	0.17±0.02	0.17±0.01	0.16±0,01	0.18±0.01	0.07±0.01	0.24±0.05	0.15±0.07	0.29±0.01	0.08±0.01	0.12±0.00	0.44±0.12
Formic acid	0.53±0.01	0.50±0.01	0.59±0.03	0.54±0,01	0.63±0.05	0.88±0.06	0.34±0.05	0.64±0.03	0.36±0.03	0.48±0.03	0.53±0.09	0.52±0.02
Acetic acid	2.68±0.08	2.55±0.05	2.68±0.03	2.80±0.03	2.82±0.08	2.81±0.13	2.10±0.17	2.90±0.12	2.36±0.13	2.27±0.08	2.07±0.27	2.15±0.17
Total phenols	3.70±0.25	1.50±050	3.30±0.03	2.80±0.03	3.24±0.41	3.35±0.14	1.69±0.24	1.9±0.28	2.26±0.16	1.87±0.05	1.85±0.13	1.76±0.06

Table 4. Results from different pretreatment methods employed on OTP at optima conditions,–reported in literature. Data are expressed in parentheses as percentage of theoretical.

	Sugar recovery* (%, w/w OTP)	Overall glucose yield** (g/100 g OTP)	Overall sugars yield* (g/100 g OTP)	References
LHW (210ºC-10 min)	94% Glucan	18.8 (57.1)	20.2 (41.5)	Cara et al., 2007
Diluted acid (180 ºC- 1% sulphuric acid)	92% Glucan 94% Hemicelulose	23.8 (72.3)	36.3 (74.5)	Cara et al., 2008b
Alkaline-extrusion (110 ºC, 150 rpm, 10 g NaOH/100 g OTP)	100% Glucan 99% Xylan	21.0 (68.6)	32.3 (66.6)	This work
Organosolvent (210º - 15 min ethanol:water 43%, w/w)	60% Glucan in solid fraction 16% 16.9% xylan (in solid fraction)	22.7 (60.5)	Non-data available	Díaz et al., 2011
Steam explosion (240 ºC-5 min- un-catalysed)	66% Glucan			Cara et al., 2008a
	40% Hemicellulose	17.0 (51.6)	21.0 (43.2)	Cara et al., 2008a
Steam explosion (230 ºC- 10 min- 1% sulphuric acid)	69.2% Glucan 80% Hemicellulose	19.4 (58.9)	31.1 (63.8)	
Salts (160 ºC-30 min-0.275 M $FeCl_3$)	85.0% Glucose 40.6% Hemicellulose	25.7 (64.9)	37.0 (64.3)	López-linares et al., 2013

* In pretreatment step.**In both pretreatment and enzymatic hydrolysis steps