Fungal cultivation in a dairy side stream: valorisation potential of whey into added-value biomass and by-products.

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Supplementary table 1. Comparison of mean biomass yields (one-way ANOVA with Tukey's post hoc test & Welch's one-way with Games Howell post hoc tests) in g DW L^{-1} (productivity capacity) and g DW g^{-1} COD removed (carbon utilisation) (mean ±SE, n = 4).

Units	*G. candidum* vs *P. corylophilum*	*G. candidum* vs *P. ostreatus*	*G. candidum* vs *P. restrictum*	*P. corylophilum* vs *P. ostreatus*	*P. corylophilum* vs *P. restrictum*	*P. ostreatus* vs *P. restrictum*
g DW L^{-1}	-8.6 ± 0.8 **(p <0.001)**	-1.6 ± 0.7 (p = 0.169)	-4.8 ± 0.7 **(p <0.001)**	6.9 ± 0.8 **(p <0.001)**	3.8 ± 0.8 **(p = 0.003)**	-3.1 ± 0.7 **(p = 0.006)**
g DW g^{-1} COD removed	-1.6 ± 0.04 **(p = 0.005)**	0.04 ± 0.03 (p = 0.663)	-0.03 ± 0.03 (p = 0.807)	0.2 ± 0.03 **(p <0.001)**	0.1 ± 0.03 **(p = 0.012)**	-0.07 ± 0.03 (p = 0.182)

*sigificant p levels (<0.05) in bold

Supplementary table 2. Comparison of the differences in mean nutrient removal efficiencies (%) (Tukey and Games Howell post hoc tests) between each species (mean ±SE, n = 4).

	G. candidum vs *P. corylophilum*	*G. candidum* vs *P. ostreatus*	*G. candidum* vs *P. restrictum*	*P. corylophilum* vs *P. ostreatus*	*P. corylophilum* vs *P. restrictum*	*P. ostreatus* vs *P. restrictum*
COD removal	-0.2 ± 3.7 (*p* = 1.000)	6.1 ± 1.3 **(*p* = 0.041)**	6.0 ± 0.7 **(*p* = 0.016)**	6.3 ± 3.8 (*p* = 0.582)	6.2 ± 3.7 (*p* = 0.577)	-0.1 ± 1.2 (*p* = 1.000)
TOC removal	2.5 ± 1.7 (*p* = 0.615)	7.2 ± 1.7 **(*p* = 0.007)**	6.6 ± 1.7 **(*p* = 0.013)**	4.7 ± 1.7 (*p* = 0.107)	4.1 ± 1.7 (*p* = 0.180)	-0.5 ± 1.7 (*p* = 0.998)
TN removal	-18.3 ± 0.8 **(*p* <0.001)**	0.4 ± 0.7 (*p* = 0.987)	-5.7 ± 0.7 **(*p* <0.001)**	18.7 ± 0.8 **(*p* <0.001)**	12.6 ± 0.8 **(*p* <0.001)**	-6.0 ± 0.7 **(*p* <0.001)**
TP removal	-0.03 ± 0.6 (*p* = 1.00)	-5.0 ± 0.6 **(*p* <0.001)**	-3.0 ± 0.6 **(*p* = 0.002)**	-5.0 ± 0.6 **(*p* <0.001)**	-3.0 ± 0.6 **(*p* = 0.002)**	2.0 ± 0.6 **(*p* = 0.041)**

*sigificant p levels (<0.05) in bold

Supplementary table 3. One-way ANOVA and Welch's one-way statistical results for nutrient removal efficiencies of all species.

Nutrient	Df	*F*	*P*
COD	4,5.632	257.379	<0.001
TOC	4,16	66.084	<0.001
TN	4,14	271.380	<0.001
TP	4,15	152.591	<0.001

Supplementary table 4. Amino acid content (g Kg^{-1}) separated into essential and non-essential amino acids.

	Amino acid	Neg. control (whey solids)	*G. candidum*	*P. corylophilum*	*P. ostreatus*	*P. restrictum*	*Scenedesmus sp.*
Essential Amino Acids	Histidine	9.1	6.9	5.1	5.6	5.9	6.6
	Isoleucine	28	20	14	16	16	15
	Leucine	62	42	30	36	35	34
	Lysine	39	28	21	24	23	22
	Methionine	9.1	6.1	4.5	5.5	5.2	9
	Phenylalanine	6.5	15	10	12	11	21
	Threonine	25	20	14	16	15	21
	Tryptophan	13	9.4	6.5	7.7	7	9.7
	Valine	27	21	15	17	17	22
Non-essential Amino Acids	Alanine	25	21	14	17	16	33
	Arginine	11	10	8.5	9.3	9	25
	Aspartic acid	55	40	29	33	32	37
	Cystine	10	7.2	5.5	6.1	6	6
	Glutamic acid	86	64	43	50	49	42
	Glycine	9.5	11	7.4	8.1	8.3	25
	Proline	25	19	12	15	15	20
	Serine	22	19	12	14	14	19
	Tyrosine	17	14	9.0	11	9.8	13