

Panda Porter

an All Grain **Baltic Porter** by **Matias**

Fermentables

Amount	Fermentable	Use
3.0 kg	Pale Ale (DE)	Mash
2.0 kg	Brown Malt (UK)	Mash
0.4 kg	CaraAmber (DE)	Mash

Hops

Amount	Hop	Time
40.0 g	East Kent Goldings	60 min

Yeasts

Name	Lab/Product
Lallemand Danstar Windsor	Danstar

Extras

Amount	Name	Time
1.0 ml	Protafloc	15.0 min
4.0 g	Baking Soda (NaHCO ₃)	90.0 min
4.0 g	Gypsum (Calcium Sulfate)	90.0 min
7.0 g	Brewer's liquorice	15.0 min
7.0 g	Liquorice root (powdered)	15.0 min

Mash steps

Step	Heat Source	Target Temp	Time
Saccharification Rest	Direct Heat	69.0 °C	90 min

Stats

Batch & Boil

Batch Size	Boil Time
19.0 L	60 min

Properties

OG	FG	IBU
1.064	1.021	35

Balance

Balanced

Overall Water Report: ?						
Ca ⁺²	Mg ⁺²	Na ⁺	Cl ⁻	SO ₄ ⁻²	Alkalinity	Residual Alkalinity
mg/l	mg/l	mg/l	mg/l	mg/l	ppm as CaCO ₃	ppm as CaCO ₃
56.6	1.0	60.7	0.0	122.6	154.1	113.2
					Range Check	
normal	normal	normal	normal	normal		

SO₄²⁻/Cl⁻ ratio: 9+ Too Bitter
 Total lactic acid as equivalent acidulated malt in grist: 0.0 %