

American Stout #2 - Amerykański Stout - Browar na Wyżynie

- Gravity **14.3 BLG**
- ABV **5.9 %**
- IBU **40**
- SRM **39.4**
- Style **American Stout**

Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **4 %**
- Size with trub loss **21.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **25.2 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **17.1 liter(s)**
- Total mash volume **22.8 liter(s)**

Steps

- Temp **66 C**, Time **45 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **17.1 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **45 min** at **66C**
- Keep mash **15 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **13.8 liter(s)** of **76C** water or to achieve **25.2 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	pale ale Viking Malt	4 kg (70.2%)	80 %	6
Grain	pszeniczny Viking Malt	0.5 kg (8.8%)	82 %	5
Grain	Karmelowy żytni Strzegom	0.2 kg (3.5%)	75 %	150
Grain	caramel aromatic - Viking Malt	0.4 kg (7%)	75 %	180
Grain	Carafa® Special I Malt Weyermann®	0.3 kg (5.3%)	1 %	900
Grain	prażony ekstra Bestmaltz	0.3 kg (5.3%)	1 %	1400

Hops

Use for	Name	Amount	Time	Alpha acid
First Wort	lunga (PL) - granulat	25 g	100 min	9.5 %
Dry Hop	Galaxy (AUS) - granulat	50 g	3 day(s)	14.5 %
Dry Hop	Wai-iti (NZ) - granulat	50 g	3 day(s)	3.3 %

Whirlpool	Galaxy (AUS) - granulat	30 g	10 min	15.5 %
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Yeasts

Name	Type	Form	Amount	Laboratory
FM13 Irlandzkie Ciemności	Ale	Slant	300 ml	Fermentum Mobile

Extras

Type	Name	Amount	Use for	Time
Water Agent	Siarczan wapnia	6 g	Mash	60 min
Water Agent	Chlorek wapnia	4 g	Mash	60 min
Water Agent	Węglan wapnia	3 g	Mash	60 min
Water Agent	kw. fosforowy 75% (wysładzanie)	2 g	Mash	60 min
Fining	Mech irlandzki	2 g	Boil	15 min

Notes

- <https://www.brewersfriend.com/mash-chemistry-and-brewing-water-calculator/?id=423XGKD>
 Ca+2 Mg+2 Na+ Cl- SO4-2 HCO
 90.8 0.0 131.0 75.7 125.4 101.665
 Mash pH *: 5.80
 SO42-/Cl- ratio: 1.7 Little Bitter
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