Czarnoziemy Na Wyżynie #1 - Amerykański Stout - Browar na Wyżynie

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- Gravity **14 BLG**
- ABV **5.8 %**
- IBU **40**
- SRM **39.6**
- Style **American Stout**

Batch size

- Expected quantity of finished beer **19 liter(s)**
- Trub loss **5 %**
- Size with trub loss **19.9 liter(s)**
- Boil time **80 min**
- Evaporation rate **8 %/h**
- Boil size **23.6 liter(s)**

Mash information

- Mash efficiency **72 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18.6 liter(s)**
- Total mash volume **24.8 liter(s)**

Steps

- Temp **67 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **76 C**, Time **10 min**

Mash step by step

- Heat up **18.6 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **10 min** at **72C**
- Keep mash **10 min** at **76C**
- Sparge using **11.2 liter(s)** of **76C** water or to achieve **23.6 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	pilzneński Viking Malt	4.5 kg *(72.6%)*	80 %	5
Grain	karmelowy 30 - Viking Malt	0.5 kg *(8.1%)*	75 %	35
Grain	płatki owsiane	0.5 kg *(8.1%)*	75 %	3
Grain	jęczmień prażony Viking Malt	0.4 kg *(6.5%)*	1 %	1000
Grain	czekoladowy ciemny Viking Malt	0.3 kg *(4.8%)*	1 %	1200

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Warrior (USA) - granulat	10 g	45 min	14.5 %
Boil	Mosaic (USA) - granulat	10 g	30 min	11.8 %
Boil	Mosaic (USA) - granulat	10 g	20 min	11.8 %
Aroma (end of boil)	Mosaic (USA) - granulat	20 g	7 min	11.8 %

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Whirlpool	Mosaic (USA) - granulat	30 g	0 min	11.8 %
Dry Hop	Mosaic (USA) - granulat	30 g	7 day(s)	11.8 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11.5 g	---

Notes

- 17,46 zł pilzneński Viking Malt
  2,35 zł karmelowy 30 - Viking Malt
  1,96 zł płatki owsiane
  2,40 zł jęczmień prażony Viking Malt
  1,80 zł czekoladowy ciemny Viking Malt
  19,90 zł Mosaic (USA) - granulat
  0,99 zł Warrior (USA) - granulat
  9,50 zł Safale US-05
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