

# American Strong Ale #1 - Browar na Wyżynie

- Gravity **18 BLG**
- ABV **7.7 %**
- IBU **43**
- SRM **19.1**

## Batch size

- Expected quantity of finished beer **19 liter(s)**
- Trub loss **6 %**
- Size with trub loss **21.3 liter(s)**
- Boil time **90 min**
- Evaporation rate **15 %/h**
- Boil size **26.6 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **21.3 liter(s)**
- Total mash volume **28.4 liter(s)**

## Steps

- Temp **69 C**, Time **45 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **21.3 liter(s)** of strike water to **77.2C**
- Add grains
- Keep mash **45 min** at **69C**
- Keep mash **15 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **12.4 liter(s)** of **76C** water or to achieve **26.6 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	pale ale Viking Malt	2.8 kg (39.4%)	80 %	6
Grain	monachijski typ II Viking Malt	2.8 kg (39.4%)	78 %	22
Grain	karmelowy 100 - Viking Malt	0.4 kg (5.6%)	75 %	100
Grain	caramel aromatic - Viking Malt	0.2 kg (2.8%)	75 %	180
Grain	karmelowy 300 - Viking Malt	0.1 kg (1.4%)	70 %	300
Grain	karmelowy 600 - Viking Malt	0.1 kg (1.4%)	65 %	600
Grain	Château Special B Castle Malting	0.1 kg (1.4%)	77 %	300
Grain	płatki jęczmienne błyskawiczne	0.6 kg (8.5%)	70 %	1

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Warrior (USA) - granulát	25 g	60 min	15.1 %

Aroma (end of boil)	Ekuanot (USA) - granulát	10 g	5 min	16.1 %
Aroma (end of boil)	Simcoe (USA) - granulát	10 g	5 min	13.3 %
Aroma (end of boil)	Nelson Sauvin (NZ) - granulát	10 g	5 min	11.4 %
Whirlpool	Ekuanot (USA) - granulát	20 g	0 min	16.1 %
Whirlpool	Simcoe (USA) - granulát	20 g	0 min	13.3 %
Whirlpool	Nelson Sauvin (NZ) - granulát	20 g	0 min	11.4 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Danstar - Nottingham	Ale	Slant	500 ml	Danstar

## Extras

Type	Name	Amount	Use for	Time
Water Agent	woda demineralizowana	15000 g	Mash	70 min
Water Agent	siarczan wapnia	4 g	Mash	70 min
Water Agent	kwás mlekowy 80%	5 g	Mash	70 min
Fining	Mech irlandzki	4 g	Boil	15 min

## Notes

- Woda blend 50% woda kranówka + 50% woda demineralizowana.

Profil wody:

Ca+2 Mg+2 Na+ Cl- SO4-2 HCO Alkalinity Residual  
88.2 10.0 3.0 7.5 90.6 102.1 105.5 36.7

SO42-/Cl- ratio: Cl- + SO42- concentration too low for meaningful ratio

<https://www.brewersfriend.com/mash-chemistry-and-brewing-water-calculator/?id=RYMXXX0>  
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