

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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