

# 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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