

Belgian Dubbel #2 - Browar na Wyżynie

- Gravity **14.7 BLG**
- ABV **6.1 %**
- IBU **25**
- SRM **19.7**
- Style **Belgian Dubbel**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.3 liter(s)**
- Boil time **90 min**
- Evaporation rate **20 %/h**
- Boil size **29.1 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **17.7 liter(s)**
- Total mash volume **22.7 liter(s)**

Steps

- Temp **64 C**, Time **45 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **17.7 liter(s)** of strike water to **70.3C**
- Add grains
- Keep mash **45 min** at **64C**
- Keep mash **15 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **16.5 liter(s)** of **76C** water or to achieve **29.1 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------------------|----------------|-------|------|
| Grain | pale ale Castle Malting | 3.5 kg (63.1%) | 80 % | 9 |
| Grain | pszeniczny Soufflet | 0.5 kg (9%) | 80 % | 5 |
| Grain | Cara Gold Castle Malting | 0.5 kg (9%) | 78 % | 120 |
| Grain | Château Special B Castle Malting | 0.5 kg (9%) | 77 % | 300 |
| Grain | pszeniczny czekoladowy Fawcett | 0.05 kg (0.9%) | 72 % | 1100 |
| Sugar | cukier kandyzowany | 0.5 kg (9%) | --- % | 2 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|------------|--------------------------------|--------|---------|------------|
| First Wort | lunga (Polishhops) - granulata | 20 g | 100 min | 10 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|------|------|------|--------|------------|
|------|------|------|--------|------------|

| | | | | |
|--|-----|-------|--------|------------------|
| FM27 Artefakty trapistów (3 pokolenie) | Ale | Slant | 300 ml | Fermentum Mobile |
|--|-----|-------|--------|------------------|

Extras

| Type | Name | Amount | Use for | Time |
|-------------|-------------------------------------|--------|---------|--------|
| Water Agent | gips | 4 g | Mash | 60 min |
| Water Agent | chlorek wapnia | 4 g | Mash | 60 min |
| Water Agent | kwas fosforowy 75% - zacier | 2 g | Mash | 60 min |
| Water Agent | kwas fosforowy 75% - wysładzanie | 2 g | Mash | 60 min |
| Water Agent | cukier kandyzowany | 500 g | Boil | 30 min |
| Fining | Mech irlandzki | 2 g | Boil | 15 min |

Notes

- <https://www.brewersfriend.com/mash-chemistry-and-brewing-water-calculator/?id=BLX430V>
 Ca+2 Mg+2 Na+ Cl- SO4-2 HCO
 53.2 0.0 131.0 69.8 85.7 5.282
 Mash pH *: 5.23
 SO42-/Cl- ratio: 1.2 Balanced
 Pitch Rate As-Is: 0.85M cells / mL / °P
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