

## Babranie w kale

- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **15**
- SRM **33.9**
- Style **Dry Stout**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **27.9 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.7 liter(s) / kg**
- Mash size **19.1 liter(s)**
- Total mash volume **24.2 liter(s)**

### Steps

- Temp **62 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **73 C**, Time **10 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **19.1 liter(s)** of strike water to **67.7C**
- Add grains
- Keep mash **40 min** at **62C**
- Keep mash **20 min** at **72C**
- Keep mash **10 min** at **73C**
- Keep mash **10 min** at **78C**
- Sparge using **14 liter(s)** of **76C** water or to achieve **27.9 liter(s)** of wort

### Fermentables

| Type  | Name                        | Amount         | Yield | EBC  |
|-------|-----------------------------|----------------|-------|------|
| Grain | Strzegom Pale Ale           | 3 kg (58.3%)   | 79 %  | 6    |
| Grain | Strzegom Monachijski typ II | 1 kg (19.4%)   | 79 %  | 22   |
| Grain | Strzegom Karmel 600         | 0.25 kg (4.9%) | 68 %  | 601  |
| Grain | Strzegom Czekoladowy ciemny | 0.25 kg (4.9%) | 68 %  | 1200 |
| Grain | Carafa III                  | 0.25 kg (4.9%) | 70 %  | 1034 |
| Grain | Płatki owsiane              | 0.4 kg (7.8%)  | 85 %  | 3    |

### Hops

| Use for   | Name          | Amount | Time     | Alpha acid |
|-----------|---------------|--------|----------|------------|
| Whirlpool | Citra         | 25 g   | 25 min   | 12 %       |
| Whirlpool | Nelson Sauvín | 10 g   | 25 min   | 11 %       |
| Dry Hop   | Nelson Sauvín | 40 g   | 1 day(s) | 11 %       |
| Dry Hop   | Citra         | 25 g   | 1 day(s) | 12 %       |

### Yeasts

Recipe has been printed via **BREWNES.com** - a complex online solution for homebrewers to track brewing process easily.

| Name  | Type | Form | Amount | Laboratory |
|-------|------|------|--------|------------|
| US-05 | Ale  | Dry  | 11 g   | Safale     |

### Extras

| Type  | Name      | Amount | Use for | Time   |
|-------|-----------|--------|---------|--------|
| Other | Chłodnica | 0 g    | Boil    | 15 min |

### Notes

- Próbuujemy drugie podejście do wora zaciernego.  
Pamiętać o dodaniu 10l wody na mashout (odp ciepłej).

Chmilenie - po schłodzeniu brzezki do 80 stopni.  
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