

# Stout świąteczny

- Gravity **15.8 BLG**
- ABV ---
- IBU **20**
- SRM **25**
- Style **Sweet Stout**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.4 liter(s)**
- Total mash volume **21.8 liter(s)**

## Steps

- Temp **67 C**, Time **50 min**
- Temp **75 C**, Time **1 min**

## Mash step by step

- Heat up **16.4 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **50 min** at **67C**
- Keep mash **1 min** at **75C**
- Sparge using **14.4 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

| Type  | Name                      | Amount         | Yield | EBC |
|-------|---------------------------|----------------|-------|-----|
| Grain | Weyermann - Pale Ale Malt | 5 kg (91.7%)   | 85 %  | 7   |
| Grain | Strzegom Karmel 150       | 0.25 kg (4.6%) | 75 %  | 150 |
| Grain | Jęczmień palony           | 0.2 kg (3.7%)  | --- % | 900 |

## Hops

| Use for | Name       | Amount | Time   | Alpha acid |
|---------|------------|--------|--------|------------|
| Boil    | Willamette | 30 g   | 60 min | 5 %        |
| Boil    | Willamette | 20 g   | 10 min | 5 %        |

## Yeasts

| Name        | Type | Form  | Amount | Laboratory |
|-------------|------|-------|--------|------------|
| Safale S-04 | Ale  | Slant | 400 ml | Safale     |

## Extras

| Type  | Name     | Amount | Use for | Time   |
|-------|----------|--------|---------|--------|
| Spice | Anyż     | 4 g    | Boil    | 10 min |
| Spice | Goździki | 5 g    | Boil    | 10 min |

|       |                            |      |      |        |
|-------|----------------------------|------|------|--------|
| Spice | Kardamon                   | 6 g  | Boil | 10 min |
| Spice | Curacao                    | 20 g | Boil | 10 min |
| Spice | Skórka słodkiej pomarańczy | 20 g | Boil | 10 min |
| Spice | Gałka muszkatułowa         | 6 g  | Boil | 10 min |
| Spice | Cynamon                    | 30 g | Boil | 10 min |

## Notes

- jęczmień palony ekstrahowany w zimnej wodzie  
*Feb 23, 2016, 7:45 PM*