

## O czym szumią wierzby

- Gravity **11.4 BLG**
- ABV **4.6 %**
- IBU **33**
- SRM **7.9**
- Style **Standard/Ordinary Bitter**

### Batch size

- Expected quantity of finished beer **17 liter(s)**
- Trub loss **5 %**
- Size with trub loss **17.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **14 %/h**
- Boil size **22.5 liter(s)**

### Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **12.7 liter(s)**
- Total mash volume **16.9 liter(s)**

### Steps

- Temp **65 C**, Time **90 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **12.7 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **90 min** at **65C**
- Keep mash **10 min** at **78C**
- Sparge using **14 liter(s)** of **76C** water or to achieve **22.5 liter(s)** of wort

### Fermentables

| Type  | Name                         | Amount         | Yield | EBC |
|-------|------------------------------|----------------|-------|-----|
| Grain | Słód Pilzneński              | 3.8 kg (89.8%) | 79 %  | 4   |
| Grain | Słód karmelowy 50 (czerwony) | 0.35 kg (8.3%) | 74 %  | 50  |
| Grain | Słód czekoladowy jasny       | 0.08 kg (1.9%) | 68 %  | 400 |

### Hops

| Use for             | Name              | Amount | Time   | Alpha acid |
|---------------------|-------------------|--------|--------|------------|
| Boil                | Fuggles           | 40 g   | 60 min | 4.2 %      |
| Boil                | Fuggles           | 15 g   | 15 min | 4.2 %      |
| Boil                | East Kent Golding | 15 g   | 15 min | 4.6 %      |
| Aroma (end of boil) | Cascade           | 20 g   | 2 min  | 7.1 %      |

### Yeasts

| Name                       | Type | Form   | Amount  | Laboratory |
|----------------------------|------|--------|---------|------------|
| WLP005 - British Ale Yeast | Ale  | Liquid | 1000 ml | White Labs |

### Extras

| Type | Name | Amount | Use for | Time |
|------|------|--------|---------|------|
|------|------|--------|---------|------|

|        |                |     |      |        |
|--------|----------------|-----|------|--------|
| Fining | Mech irlandzki | 4 g | Boil | 10 min |
|--------|----------------|-----|------|--------|