

## święteczne przyprawiane (BIAB)

- Gravity **15.9 BLG**
- ABV **6.7 %**
- IBU **9**
- SRM **12.9**
- Style **Christmas/Winter Specialty Spiced Beer**

### Batch size

- Expected quantity of finished beer **13 liter(s)**
- Trub loss **10 %**
- Size with trub loss **14.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **5 %/h**
- Boil size **16.4 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **6.5 liter(s) / kg**
- Mash size **26.6 liter(s)**
- Total mash volume **30.8 liter(s)**

### Steps

- Temp **63 C**, Time **40 min**
- Temp **72 C**, Time **20 min**

### Mash step by step

- Heat up **26.6 liter(s)** of strike water to **66.3C**
- Add grains
- Keep mash **40 min** at **63C**
- Keep mash **20 min** at **72C**
- Sparge using **-6.1 liter(s)** of **76C** water or to achieve **16.4 liter(s)** of wort

### Fermentables

| Type  | Name                    | Amount         | Yield | EBC |
|-------|-------------------------|----------------|-------|-----|
| Grain | Pilzneński              | 3 kg (73.2%)   | 81 %  | 4   |
| Grain | Monachijski             | 0.6 kg (14.6%) | 80 %  | 16  |
| Grain | Strzegom Bursztynowy    | 0.4 kg (9.8%)  | 70 %  | 49  |
| Grain | Briess - Chocolate Malt | 0.1 kg (2.4%)  | 60 %  | 690 |

### Hops

| Use for | Name        | Amount | Time   | Alpha acid |
|---------|-------------|--------|--------|------------|
| Boil    | Hersbrucker | 10 g   | 60 min | 5.1 %      |
| Boil    | Tettnang    | 5 g    | 30 min | 3.2 %      |

### Yeasts

| Name        | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale S-33 | Ale  | Dry  | 11.5 g | Fermentis  |

### Extras

| Type  | Name     | Amount | Use for | Time  |
|-------|----------|--------|---------|-------|
| Spice | cynamion | 3 g    | Boil    | 0 min |

|       |                  |       |      |       |
|-------|------------------|-------|------|-------|
| Spice | kolendra         | 3.2 g | Boil | 0 min |
| Spice | goździki         | 3.2 g | Boil | 0 min |
| Spice | ziele angielskie | 3.2 g | Boil | 0 min |