

czarny grudzień

- Gravity **16.1 BLG**
- ABV **6.8 %**
- IBU **25**
- SRM **42.2**
- Style **Christmas/Winter Specialty Spiced Beer**

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 **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **19.5 liter(s)**
- Total mash volume **26 liter(s)**

Fermentables

| Type | Name | Amount | Yield | EBC |
|----------------|---------------------------------|---------------|-------|------|
| Grain | Strzegom Wiedeński | 4 kg (57.1%) | 79 % | 10 |
| Grain | Strzegom Monachijski typ I | 1 kg (14.3%) | 79 % | 16 |
| Grain | Strzegom Czekoladowy jasny | 0.5 kg (7.1%) | 68 % | 400 |
| Grain | Strzegom Czekoladowy ciemny | 0.5 kg (7.1%) | 68 % | 1200 |
| Grain | Weyermann Caramunich 3 | 0.5 kg (7.1%) | 76 % | 150 |
| Liquid Extract | Miód Gryczany (Buckwheat Honey) | 0.5 kg (7.1%) | 70 % | 40 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|-------------------|--------|--------|------------|
| Boil | Lublin (Lubelski) | 50 g | 60 min | 4 % |
| Boil | Lublin (Lubelski) | 25 g | 10 min | 4 % |
| Boil | Lublin (Lubelski) | 25 g | 5 min | 4 % |

Yeasts

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

Extras

| Type | Name | Amount | Use for | Time |
|--------|----------------|--------|---------|--------|
| Flavor | ksylitol | 250 g | Boil | 15 min |
| Spice | goździki sztuk | 10 g | Boil | 10 min |
| Spice | cynamon sztuk | 1 g | Boil | 10 min |
| Spice | anyż | 3 g | Boil | 10 min |

| | | | | |
|--------|-----------------------|-----|------|--------|
| Spice | skorka z 1 pomaranczy | 1 g | Boil | 10 min |
| Fining | mech irlandzki | 5 g | Boil | 15 min |