

Black & White

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **14**
- SRM **10.7**
- Style **Dunkelweizen**

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 **14 liter(s)**
- Total mash volume **18.6 liter(s)**

Steps

- Temp **46 C**, Time **10 min**
- Temp **53 C**, Time **15 min**
- Temp **63 C**, Time **30 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **0 min**

Mash step by step

- Heat up **14 liter(s)** of strike water to **50.3C**
- Add grains
- Keep mash **10 min** at **46C**
- Keep mash **15 min** at **53C**
- Keep mash **30 min** at **63C**
- Keep mash **10 min** at **72C**
- Keep mash **0 min** at **78C**
- Sparge using **16 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------------|----------------|-------|-----|
| Grain | Pszeniczny | 2.4 kg (51.5%) | 85 % | 4 |
| Grain | Pilzneński | 1.1 kg (23.6%) | 81 % | 4 |
| Grain | Strzegom Monachijski typ II | 0.8 kg (17.2%) | 79 % | 22 |
| Grain | Czekoladowy | 0.06 kg (1.3%) | 60 % | 788 |
| Grain | Strzegom Karmel 150 | 0.3 kg (6.4%) | 75 % | 150 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|-------------------|--------|--------|------------|
| Boil | Lublin (Lubelski) | 20 g | 70 min | 4 % |
| Boil | Lublin (Lubelski) | 10 g | 30 min | 4 % |
| Boil | Lublin (Lubelski) | 10 g | 5 min | 4 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|------|------|------|--------|------------|
|------|------|------|--------|------------|

| | | | | |
|-------|-------|-----|------|--------|
| Wb-06 | Wheat | Dry | 11 g | Safale |
|-------|-------|-----|------|--------|