

Full aroma hops II

- Gravity **14.5 BLG**
- ABV **6 %**
- IBU **44**
- SRM **4**

Batch size

- Expected quantity of finished beer **24 liter(s)**
- Trub loss **5 %**
- Size with trub loss **25.7 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **30.9 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **24.5 liter(s)**
- Total mash volume **31.5 liter(s)**

Steps

- Temp **62 C**, Time **10 min**
- Temp **72 C**, Time **45 min**
- Temp **76 C**, Time **15 min**

Mash step by step

- Heat up **24.5 liter(s)** of strike water to **68C**
- Add grains
- Keep mash **10 min** at **62C**
- Keep mash **45 min** at **72C**
- Keep mash **15 min** at **76C**
- Sparge using **13.4 liter(s)** of **76C** water or to achieve **30.9 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|------------|-------------|-------|-----|
| Grain | Pilzneński | 7 kg (100%) | 81 % | 4 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|-------------------|--------|----------|------------|
| Boil | Magnum | 20 g | 90 min | 12 % |
| Boil | Lublin (Lubelski) | 40 g | 50 min | 2.8 % |
| Boil | Magnum | 20 g | 15 min | 12 % |
| Boil | Chinook | 10 g | 10 min | 13 % |
| Dry Hop | Magnum | 10 g | 4 day(s) | 12 % |
| Dry Hop | Chinook | 20 g | 4 day(s) | 13 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-----------------------|------|-------|---------|------------|
| Danstar - Windsor Ale | Ale | Slant | 1000 ml | Danstar |