

#110 APA Budowlane

- Gravity **11 BLG**
- ABV **4.4 %**
- IBU **49**
- SRM **6.9**
- Style **Special/Best/Premium Bitter**

Batch size

- Expected quantity of finished beer **24 liter(s)**
- Trub loss **4 %**
- Size with trub loss **25.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **30.6 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **17.9 liter(s)**
- Total mash volume **23 liter(s)**

Steps

- Temp **67 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **76 C**, Time **1 min**

Mash step by step

- Heat up **17.9 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **10 min** at **72C**
- Keep mash **1 min** at **76C**
- Sparge using **17.8 liter(s)** of **76C** water or to achieve **30.6 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|---------------------|----------------|--------|-----|
| Grain | Malteurop Lager | 4.2 kg (82.4%) | 82 % | 3 |
| Grain | Strzegom Karmel 150 | 0.4 kg (7.8%) | 75 % | 150 |
| Grain | Malteurop Wheat | 0.5 kg (9.8%) | 86.8 % | 5 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|------------------------|--------|--------|------------|
| Boil | Columbus/Tomahawk/Zeus | 20 g | 60 min | 15.5 % |
| Boil | Columbus/Tomahawk/Zeus | 35 g | 10 min | 15.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|----------------------|------|-------|--------|------------|
| Danstar - Nottingham | Ale | Slant | 200 ml | Danstar |