#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