

#19 APA Michigan Copper

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **45**
- SRM **4**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.4 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **20 liter(s)**
- Total mash volume **25 liter(s)**

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	5 kg (100%)	75 %	5

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Mandarina Bavaria	30 g	60 min	9.1 %
Boil	Michigan Copper	25 g	20 min	10 %
Dry Hop	Michigan Copper	75 g	4 day(s)	10 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11.5 g	Fermentis