

Re: microscope for bacteriology (lomo or leica)

Source: <http://sci.tech--archive.net/Archive/sci.techniques.microscopy/2005-12/msg00020.html>

- *From:* "Kevin Cunningham" <smskjd@xxxxxxxxxxxxxxxx>
 - *Date:* Sun, 04 Dec 2005 15:48:00 GMT
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"GTO" <gregor_o@xxxxxxxxxxxxxxxx> wrote in message
[news:kMvkf.26275\\$7h7.16354@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx](mailto:news:kMvkf.26275$7h7.16354@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx)
> For this application you need an aplanat-achromat condenser. A new one
> sells for more than \$1000. And that's just the illumination. Without it,
> you will not be able to differentiate morphological structures of
> bacteria. You need to maximize resolution (NA 1.3 to 1.4). I have not seen
> a system for \$500 that can do this (even used). – You also did not specify
> if you want to look at this using BF, phase, DIC, or DF illumination type
> (not to mention fluorescence microscopy, which will cost at least \$2000
> for a basic EPI setup). Are your specimens stained? For fresh ones, you
> should use DIC for maximum contrast AND resolution.
>
> In any case, I would not buy either scope you mentioned even for standard
> histology applications. A good used Leitz will get you much further. The
> mechanical and optical quality of the scopes you listed are far from being
> useful. They are toys. A simple 100 oil lens with a cheap Abbe 1.25 NA
> condenser isn't too useful. A used Leitz APO NA 1.32 with a aplanat 1.4 NA
> condenser will really brighten things up! And again, if you need to look
> at fresh specimens, you need the appropriate contrast method.
>
> Don't put the stakes too high and think you can get a solution with a low
> budget. – If I need a decent car, I need to put good cash on the table.
> Otherwise, I may just rent one for the occasions I need it.
>
> Gregor
>
> "daveg" <davegoodstein@xxxxxxxx> wrote in message
> news:1133651424.649122.25660@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
>> Hi, can u help me. I wanna buy a microscope that is capable of getting
>> enough magnification and resolution to see bacteria morphology
>> (differentiate endospores, cell walls, cillia?, flagella?, etc.), my
>> budget is around \$500 dollars + – \$100 .
>>
>> I was thinking about lomo multiscope BMH4-BH
>> <http://www.opticsplanet.net/mulbm.html>
>> and i think it can do that plus its upgradable, my other option could
>> be a leica monocular microscope bm e
>>

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[http://www.leica-microsystems.com/website/lms.nsf?opendatabase&path=/website/products.nsf/\(ALLIDs\)/493BEE9D](http://www.leica-microsystems.com/website/lms.nsf?opendatabase&path=/website/products.nsf/(ALLIDs)/493BEE9D)

>>

>> There are alot of scopes and most say research level and im confused a

>> little right now, lomo is an option for me because it has guarantee in

>> mexico and i think i can have access to one at a local dealer, the

>> other, is a leica and i picked this because the brand.

>> Its a monocular scope but that doest really matter now (binocular =

>> prettier to look at).

>>

>> Oh, i used the multiscoppe bf but without a sample, just some dirt, i

>> think that this scope is just a little bit harder to use than my

>> college leica microscope, also the lomo doesnt feel cheap only its

>> looks.

>>

>> Well enough said, is there something you would like to add, advise or

>> smthing, think that \$500 is alot lota of money for me, so dont think

>> ill follow your advise for a \$700 scope.

>>

>> One thing im worried about are the used scopes on ebay since if theres

>> a defect it will be hard for me to return it (live in mexico).

>>

>> At this time i only want it for bacteriological research. (100x oil)

>>

>> Thanks for reading.

>>

>

As usual a great post from GTO! Here's my two cents. The Lomo is an imatation of a good microscope, a second rate instrument. Now for them that pretty good, they used to be third rate.

Don't buy a monocular microscope. They are difficult to use at best and can cause injury if used in a professional manner.

The best idea would be talk to your profesors and try to become an undergraduate assistant. You will wash glass after glass and take care of animal after animal but you will get to use the equipement in the lab. Soon you will be in the paper writing part of science. Of course you will get to use the college's instruments for class time.

Let us know how your progressing.

Kevin Cunningham
SMS

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• *Follow-Ups:*

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◇ From: daveg

• **References:**

◆ [microscope for bacteriology \(lomo or leica \)](#)

◇ From: daveg

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